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ABSTRACT

This manual is intended for use as part of a 3-day orientation training for new faculty at the U.S. Army War College (USAWC) in Pennsylvania, a facility which trains tactical and operational leaders for policy and strategy roles in the military and related agencies. The orientation focuses on five factors which determine the value of an educational program: (1) the teacher (abilities, empathy, and support); (2) texts, learning materials, and teaching techniques (appropriateness and applications); (3) feeling welcome in the learning environment; (4) self-achievement assessments; and (5) relative challenge of the course. Following an introduction and the syllabus, the first four chapters address the following topics: the USAWC mission; the resource-rich environment of the USAWC; learner-centered, inquiry-driven graduate study; and teacher and student experience and knowledge negotiating and positioning. Chapter 5 is a reprint of "Collaborative Learning: Higher Education, Interdependence, and the Authority of Knowledge" by Kenneth A. Bruffee. Chapter 6 is comprised of two reprints: "Learning Styles & Teaching Strategies" (Jeff King) and "A User's Guide to the Case Study Method of Teaching" (James F. Holcomb). Chapter 7 briefly describes a workshop conducted by Carol Barton on critical thinking, writing, and graduate study. Chapter 8 provides a handbook for a workshop on using the technology available in USAWC classrooms. The concluding chapter includes a reprint of "Becoming a Critically Reflective Teacher" (Stephen D. Brookfield). (DB)

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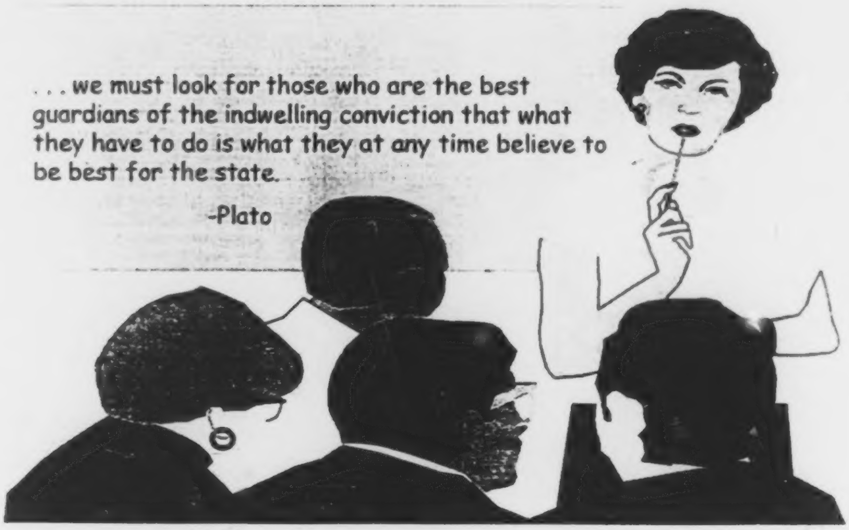
Teaching at the United States Army War College

Philosophy, Practice, and Resources
AY 2000



> . . . we must look for those who are the best guardians of the indwelling conviction that what they have to do is what they at any time believe to be best for the state. . .
>
> -Plato

John R. Goss III, PhD
Directorate of Academic Affairs
US Army War College
AY 00

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INTRODUCTION

Learner-centered, inquiry-driven graduate study is what we do in the academic program at the US Army War College (USAWC). By that we mean students develop an individual program of study (focusing on courses beyond the core which individualize their classroom experiences) and a Strategic Research Project (SRP) topic informed by a set of questions each has developed as they prepared to attend this senior service college. Our goal is to transform proven leaders in tactical and operational roles into leaders responsible for policy and strategy roles in the military and related agencies responsible for the development and implementation of US foreign policy. Our approach to their education must mirror the transformation we hope each of them to achieve. We must teach at the conceptual level.

Much of the material covered in this book may be new to you, just as much of the material covered in the USAWC curriculum may be new to our students. And like our students, you may be moving into a new area of your professional development. As you make this transition, the best advice may be to remember that learning is a *process*, that the best way to learn new material is to *link it to prior experiences*, and that you must release yourself from the need to be a master of content and *embrace the obligation to master the process*.

While many faculty members come to the US Army War College from highly responsible positions in operational or planning organizations, like our students, the skills they bring to the role of "faculty" are not always fully developed at the conceptual or strategic level. What teaching faculty do at the US Army War College is model practices within each course by demonstrating the application of strategic, conceptual thought to the field of study under examination. In short, we have a method of instruction broadly applicable to all coursework. This method is not simply a "good idea"; it is grounded in relevant research, reflectively applied. Taken together, the research identifies five (5) important factors informing the value of an educational program:

- The teacher (abilities, empathy, and support)
- Texts, learning materials and teaching techniques (appropriateness and applications)
- Feeling welcome in the learning environment
- Self-achievement assessments
- Relative challenge of the course

Therefore, our focus in new faculty orientation will be on these five criteria. Our schedule will reflect these factors.

The purpose of this brief introduction, and the orientation and faculty development programming which is a large part of our work here, is to allow you to build upon prior knowledge, linking it to new understandings about the ways of generating new knowledge in a collaborative learning environment.

A priori knowledge (that which you—and the students—bring to the learning environment) is the necessary starting point to develop stronger instructional skills. Moreover, a deep understanding of our existing knowledge (knowing what we know so we can know what we don't know) is necessary before we can use it to inform our practice. So one of the tasks new faculty need to do is to reflect on, and organize, what they believe they know. Why are you here, at the US Army War College in particular? And how does what you know fit into our work in this place?

Next we need to understand what we want our students to know when they're done with the program here. Do we want them to know more information, or do we want them to think differently about old information as well as incorporate new information into the process? And just what new information ought they know, and how does it fit into the diverse sets of old information they bring along intellectually to this program? And what if some students know more information than I do?

Once all that is sorted out, we need to think about how to make the transformation in thinking happen. This happens at the intersection of old knowledge and new information, the synthesis leading to the creation of new kinds of understanding (*a priori knowledge*). This is also the centerpiece of our new faculty orientation program. We hope to help you develop skills useful in creating a learning environment supportive of that process of synthesis, which is learning as its most elemental.

The Army's expectations of this program are simple: give students an opportunity to reflect, to think; a chance to step back from the fast paced operations tempo characterizing their professional lives; to study the practice and art of national security policy and strategy as they relate to landpower and military operations. By the same token, we must be aware of and take seriously criticisms that the program, from both internal and external constituencies, tends to be too disparate, that there is not enough "war" in the War College, and that students spend too much time in the classroom (as distinct from engaging in self-directed learning).

This book sets forth a philosophy of practice that addresses these criticisms in part. Learner-centered, inquiry-driven graduate study allows students to *focus* their inquiries on particular concerns of the US Army, *as applied to the nature of conflict and war*, while *liberating their minds and bodies* from the classroom to interact with the larger social environment.

The vision for the US Army War College emphasizes that the academic program focus on the grand operational and strategic levels. The USAWC is an integrated collection of academic and research components (the College, the Military History Institute, the Center for Strategic Leadership, the Army Physical Fitness Research Institute, and the Strategic Studies Institute) with a common interest in war, national defense, and Army reform issues. Students' individual study plans are the centerpiece of their programs of study during their time here; the Strategic Research Project is the linking mechanism, the synthesis of students' cumulative learning.

Our goal as faculty is to make the vision a reality for our students, thereby achieving not only our objectives but also meeting the expectations of the US Army and our obligations to the nation.

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Syllabus: New Faculty Orientation
6 – 9 July 1999
US Army War College

Before Arriving:

Read: Christensen, C. Roland, et al. *Education for Judgement: The Artistry of Discussion Leadership*. Cambridge, MA: Harvard Business School Press, 1991, pp. 15-34; 99-119.

McKeachie, W. J. *Teaching Tips: Strategies, Research, and Theory for College and University Teachers*. New York: Houghton-Mifflin Co., 1999, pp. 40-42; 153-157; 158-165; 289-300; 312-324.

Chapter 1 The USAWC Mission: What We Do, *Teaching at the USAWC: A Primer*
Chapter 2 The United States Army War College: A Resource Rich Environment, *Teaching at the USAWC: A Primer*
Chapter 3 Learner-Centered, Inquiry-Driven Graduate Study, *Teaching at the USAWC: A Primer*
Chapter 4 Teacher and Student Experience and Knowledge: Negotiating and Positioning, *Teaching at the USAWC: A Primer*
USAWC Curriculum Briefing (http://carlisle-www.army.mil/usawc/daa/curbrief/index.htm)

Tuesday, 6 July: Orientation to the USAWC

Welcome to the US Army War College: MG Robert H. Scales, Jr., Commandant

Overview of USAWC Curriculum: Dr. William T. Johnsen
Read: USAWC Curriculum Pamphlet
Chapters 1 & 2, *Teaching at the USAWC: A Primer*

Teaching and Learning, the Philosophy of Practice at the USAWC: Dr. John R. Goss, III
Read: Chapter 3, *Teaching at the USAWC: A Primer*

USAWC Library Orientation: Mr. Bohdan Kohuitak, Director

USAWC and the Institutes Panel:
Prof. Douglas Campbell, CSL; COL Larry Wortzel, SSI; COL Bill Barko, AFPRI; LTC Mike Perry, MHI
Read: Chapter 2, *Teaching at the USAWC: A Primer*

ILP and the SRP Panel:
Dr. Herb Barber, DCLM; Prof. Patricia Pond, Communicative Arts Program; Dr. Douglas Johnson, SSI; Prof. Mike Morin, Doctrine Office

USAWC Operations: Col. Robert Cronin
Student Operations: Ms. Cindy Davis

For Tomorrow:

Read: Chapter 5, *Teaching at the USAWC: A Primer*
Christensen, C. Roland, et al. pp. 153-172, 249-261.
McKeachie, W. J. pp. 44-64, 66-84, and 175-181.

Wednesday, 7 July

Review of the Readings/Key Concepts: Dr. Goss

Collaborative Learning Workshop: Dr. Kenneth A. Bruffee, Brooklyn College, CUNY

Case Methods and Their Application at the USAWC: COL Jim Holcomb (DNSS)

Knowledge, Experience and Learning: Dr. Goss
Read: Chapter 4, *Teaching at the USAWC: A Primer*

For Tomorrow:

Read: Chapters 6 and 7, *Teaching at the USAWC: A Primer*
Christensen, C. Roland, et al. pp. 249-261.
McKeachie, W. J. pp. 132-142, 167-174, 175-182, 218-234, 326-331.

Thursday, 8 July 1999

Teaching and Learning Styles: Mr. Jeff King, Art Institute of Dallas
McKeachie, pp. 167-174, 218-234

The Writing Process: A Collaborative Learning Experience: Dr. Carol Barton, Averett College
Christensen, pp. 249-261
McKeachie, pp. 132-142

For Tomorrow:

Read: McKeachie, W. J. pp. 183-199, 302-311.

Friday, 9 July

Technology in the Classroom to Enhance Student Learning: COL Tim Harrod

So Where Do We Go From Here?: Dr. Goss

For the Rest of Your Time Here:

Read: All those materials again—and seek out others to suit your needs.

Chapter One

The USAWC Mission: What We Do

The USAWC seeks to become the nation's preeminent center for strategic leadership and landpower, a learning institution and an installation of excellence, preparing today's leaders for tomorrow's challenges pursuing mastery of the strategic art through education, research and outreach. To achieve this, the USAWC prepares selected military, civilian and international leaders to assume strategic responsibilities in military and national security organizations through education in the employment of the US Army as part of a unified, joint, or multinational force in support of national security strategy.
(USAWC Vision and Mission)

Our goal is to transform leaders proven at the tactical and operational levels into leaders responsible for policy and strategy roles in the military and related agencies that develop and implement US foreign policy. Our approach to their education mirrors the transformation we hope each of them to achieve. We teach at the conceptual level. Our academic focus centers on Elihu Root's (the USAWC's founder) three great concerns: responsible command, national defense, and military art and science. Within these three areas, we focus on these five encompassing questions:

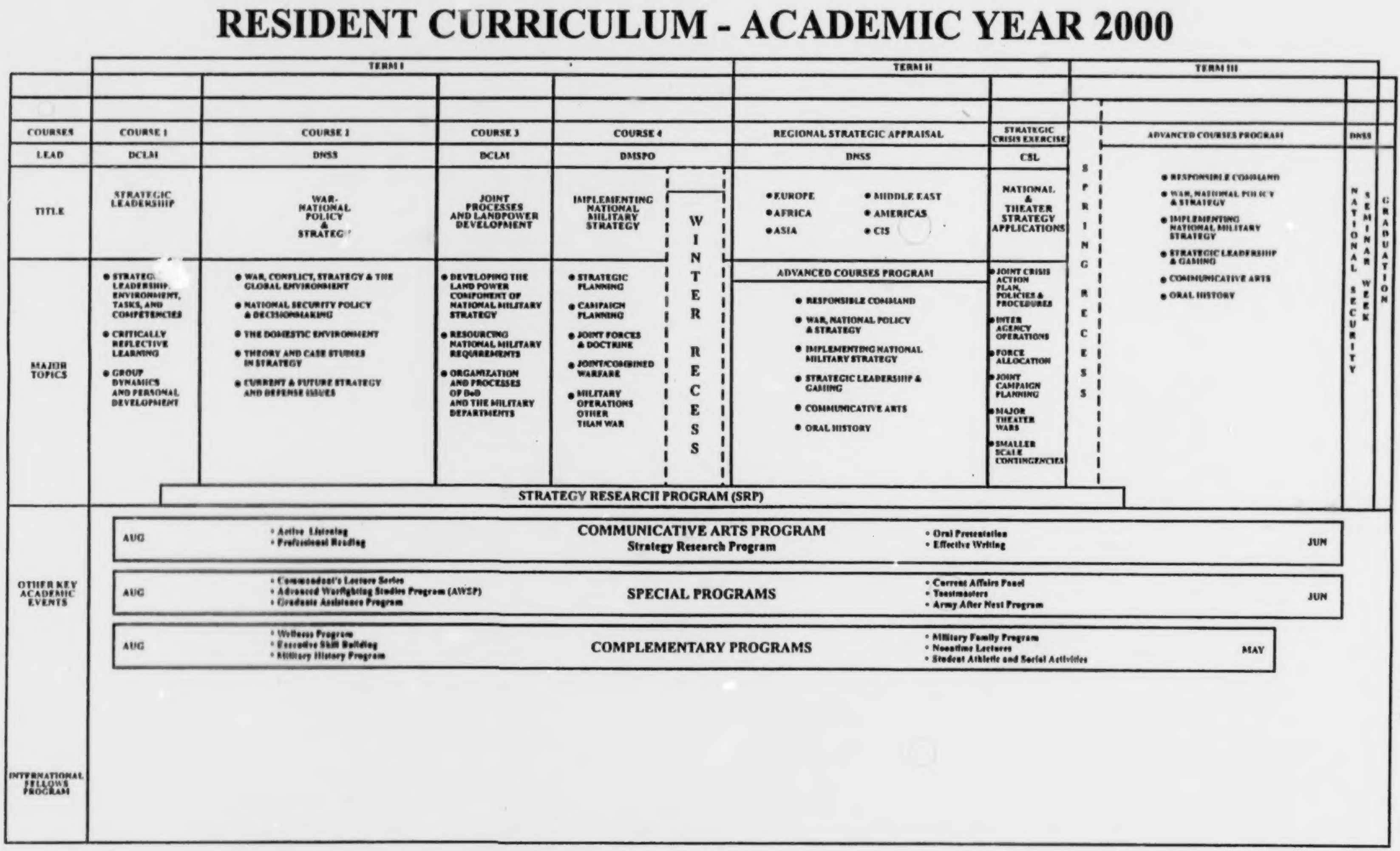
1. *How do political objectives and constraints influence military objectives, concepts and resources?*
2. *How do military objectives, concepts and resources affect the strategic and operational levels of war?*
3. *How and why does the theatre level of war become the focus of joint and multinational force structuring and planning?*
4. *How and when do we apply military force in operations other than war?*
5. *What is the nature of war and conflict?*

These questions are broad enough to apply to the full range of coursework offered at the USAWC, yet they lack a narrowness which would limit students' ability to frame inquiry informed by their particular experiences. In short, there is something here for everyone. The challenge, of course, is to help students find their particular interests and frame their particular questions deriving from the universal. Student-centered, inquiry-driven graduate study is what this process is all about. Students develop an individualized program of study beyond the core courses, choosing electives and a Strategic Research Project (SRP) topic directed by a specific set of questions informed by the institutional questions.

Figure 1 presents graphically the academic year at the USAWC. The Core (Courses 1-4) serves as a foundation for the RSA, electives, the SCE, and the SRP that students will do over the balance of the year. The Core contains information that everyone must know. Developing a bridge between core knowledge and specific interests is the first challenge students will face upon entering the USAWC.

The Individual Learning Plan (ILP) serves as a mechanism to focus student inquiry at the beginning of the year, which attempts to get students to focus on what *they* want to accomplish from their year here. The Strategic Research Program (SRP) might serve as a linking mechanism for the entire program. Everything a student studies here should in some way be viewed through the dual, yet inter-related, lenses of the ILP and the SRP. This is not to say that everything a students learns here is useful in the SRP, but deciding what is useful and not is part of the reflective learning central to student-centered, inquiry-driven education. Complementary and special programs enhance the learning experience by adding different perspectives and dimensions of understanding to the student's experience.

Figure 1:



RESIDENT CURRICULUM - ACADEMIC YEAR 2000

	TERM I					TERM II			TERM III		
COURSES	COURSE 1	COURSE 2	COURSE 3	COURSE 4		REGIONAL STRATEGIC APPRAISAL	STRATEGIC CRISIS EXERCISE		ADVANCED COURSES PROGRAM	DNSS	
LEAD	DCLM	DNSS	DCLM	DMSPO		DNSS	CSL				
TITLE	STRATEGIC LEADERSHIP	WAR-NATIONAL POLICY & STRATEGY	JOINT PROCESSES AND LANDPOWER DEVELOPMENT	IMPLEMENTING NATIONAL MILITARY STRATEGY	WINTER RECESS	• EUROPE • AFRICA • ASIA • MIDDLE EAST • AMERICAS • CIS	NATIONAL & THEATER STRATEGY APPLICATIONS	SPRING RECESS	• RESPONSIBLE COMMAND • WAR, NATIONAL POLICY & STRATEGY • IMPLEMENTING NATIONAL MILITARY STRATEGY • STRATEGIC LEADERSHIP & GAMING • COMMUNICATIVE ARTS • ORAL HISTORY	NATIONAL SECURITY SEMINAR WEEK	GRADUATION
MAJOR TOPICS	• STRATEGIC LEADERSHIP: ENVIRONMENT, TASKS, AND COMPETENCIES • CRITICALLY REFLECTIVE LEARNING • GROUP DYNAMICS AND PERSONAL DEVELOPMENT	• WAR, CONFLICT, STRATEGY & THE GLOBAL ENVIRONMENT • NATIONAL SECURITY POLICY & DECISIONMAKING • THE DOMESTIC ENVIRONMENT • THEORY AND CASE STUDIES IN STRATEGY • CURRENT & FUTURE STRATEGY AND DEFENSE ISSUES	• DEVELOPING THE LAND POWER COMPONENT OF NATIONAL MILITARY STRATEGY • RESOURCING NATIONAL MILITARY REQUIREMENTS • ORGANIZATION AND PROCESSES OF DoD AND THE MILITARY DEPARTMENTS	• STRATEGIC PLANNING • CAMPAIGN PLANNING • JOINT FORCES & DOCTRINE • JOINT/COMBINED WARFARE • MILITARY OPERATIONS OTHER THAN WAR		ADVANCED COURSES PROGRAM • RESPONSIBLE COMMAND • WAR, NATIONAL POLICY & STRATEGY • IMPLEMENTING NATIONAL MILITARY STRATEGY • STRATEGIC LEADERSHIP & GAMING • COMMUNICATIVE ARTS • ORAL HISTORY	• JOINT CRISIS ACTION PLAN, POLICIES & PROCEDURES • INTER AGENCY OPERATIONS • FORCE ALLOCATION • JOINT CAMPAIGN PLANNING • MAJOR THEATER WARS • SMALLER SCALE CONTINGENCIES				
		STRATEGY RESEARCH PROGRAM (SRP)									

OTHER KEY ACADEMIC EVENTS	AUG	• Active Listening • Professional Reading	COMMUNICATIVE ARTS PROGRAM Strategy Research Program	• Oral Presentation • Effective Writing	JUN
	AUG	• Commandant's Lecture Series • Advanced Warfighting Studies Program (AWSP) • Graduate Assistance Program	SPECIAL PROGRAMS	• Current Affairs Panel • Toastmasters • Army After Next Program	JUN
	AUG	• Wellness Program • Executive Skill Building • Military History Program	COMPLEMENTARY PROGRAMS	• Military Family Program • Noontime Lectures • Student Athletic and Social Activities	MAY
INTERNATIONAL FELLOWS PROGRAM					

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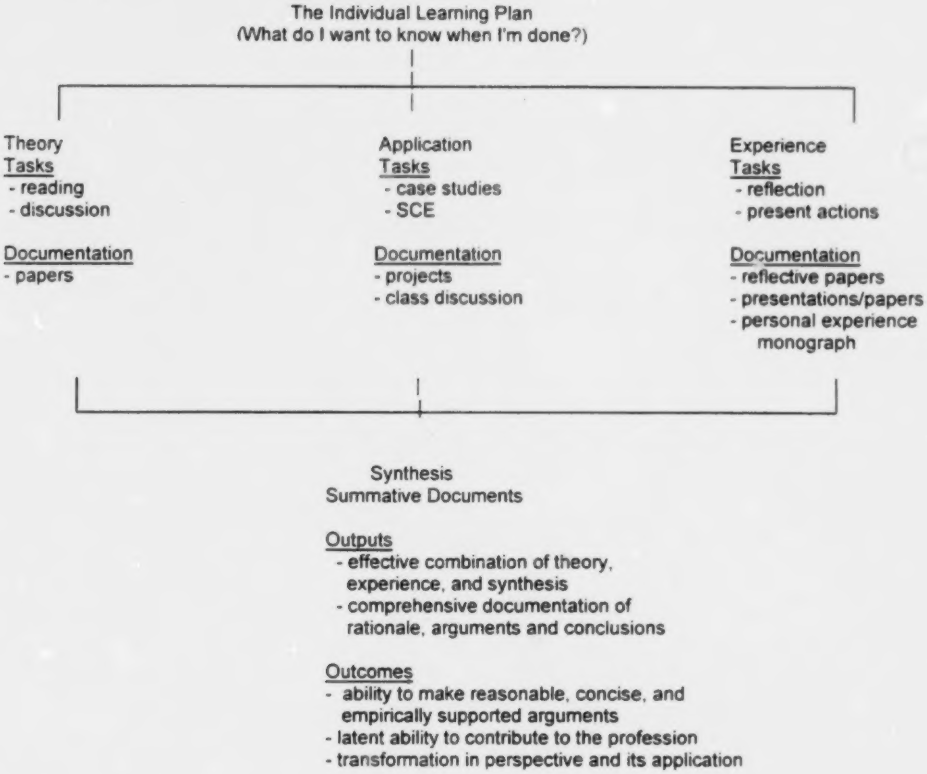
As a student moves from the ILP to the completed SRP, his/her thinking should move from the merely informational (transmission) to the largely conceptual (transformation) realms. *Merely informational* means the student is taking in new information (reading, sharing experiences, listening to lectures and speakers). *Largely conceptual* thinking is engaging in synthesis, linking pieces of information together developed by specific research questions, and leading to the creation of new knowledge. This is a dynamic process not a linear one. Learning in an inquiry-driven environment is not an additive process; it is a transformative one. As students learn more, and as their thought process deepens, old knowledge should be reflected upon and thereby transformed. Figure 2 presents graphically the relationship among these institutional and conceptual elements.

Figure 2: The US Army War College Learning Process


The Individual Learning Plan
(What do I want to know when I'm done?)
Theory
Tasks
- reading
- discussion
Documentation
- papers
Application
Tasks
- case studies
- SCE
Documentation
- projects
- class discussion
Experience
Tasks
- reflection
- present actions
Documentation
- reflective papers
- presentations/papers
- personal experience monograph
Synthesis
Summative Documents
Outputs
- effective combination of theory, experience, and synthesis
- comprehensive documentation of rationale, arguments and conclusions
Outcomes
- ability to make reasonable, concise, and empirically supported arguments
- latent ability to contribute to the profession
- transformation in perspective and its application

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Given the mission of the USAWC, the student is expected to articulate in the Individual Learning Plan his or her particular interests within that context (What do I want to know when I'm done?). This is the beginning of an inquiry-driven program of study. Students must learn to ask questions, particularly ones that may not have very specific answers. Encouraging students to ask conceptual questions will lead to conceptual thinking. That is what the ILP is all about. The ILP and the Core courses should take into account the three elements of inquiry-driven study (theory, experience and application) and the nexus of learning (synthesis). Briefly, these elements work together as follows[1]:

- *What Do I Want to Know When I'm Done?*: The answer to this question is the student's reason for being at the USAWC. The design of a program of study should answer that question. The elements of the ILP (courses, SRP, complementary and special programming) must fit together to form a coherent whole, informed by the question. There is the assumption that students bring with them an abundance of prior knowledge and experience.
- *Theory*: All learning at the USAWC is supported by theory. Theory is the reason why we think things works as they do. (Doctrine might be considered theory in this context.) Students must understand why we think things work as they do before they can begin to engage in substantive inquiry into their own topics. The Core lays out the basic theoretical foundation of our curriculum. Electives build on this. The SRP allows the student to apply, critique and develop theory as it relates to the specific problem statement.
- *Experience*: The role experience and prior knowledge play is not that of "truth" but as the starting- (and ending-) point for new learning. We assume students know things; we attempt to get them to reflect on this prior knowledge in the light of new knowledge. Prior knowledge is simply a hypothesis, an idea about how things work, to be tested during the USAWC year.
- *Application*: The application of theory and prior experience happens in and outside the classroom. Learning activities within the classroom are designed to reinforce the concepts students will have read about beforehand. Outside the classroom, both the learning materials as associated with the course and the student's SRP topic should encourage independent thought and inquiry. The link between the courses and their role in informing the SRP is critical to success in this area.
- *Synthesis*: This is where students demonstrate their mastery of course content and its application. Course papers written at the graduate-level, summative briefings, and class discussion can each demonstrate a student's ability to create new knowledge of theory, experience and application. It is important to remember that *synthesis* is our ultimate objective in graduate education—and at the USAWC. Merely to know and apply someone else's ideas is not enough.

So how do we do this? Trust the process.

Remembering the elements of success in student learning, first know that the teacher has the biggest impact on the student's assessment of how much he or she has learned. You're the teacher. What are your most important roles in the USAWC classroom? Know the material; take seriously the process of instruction; trust students to do what we expect; be supportive; demand the best. More on these roles will constitute the following chapters.

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[1] Adapted from *Supplement to the Graduate Program Handbook. Vermont College of Norwich University*. John R. Goss, III, 1992.

Chapter Two

The United States Army War College: A Resource Rich Environment

The United States Army War College is comprised of several distinct but inter-related academic and research organizations. Each which contribute significantly to the curriculum and supports student research. This chapter will articulate linkages among these units and how each may aid you in your work on the faculty.

The Teaching Units

Responsibility for executing the academic program at the USAWC belongs to the Dean of Academic Affairs. All four teaching units report to the Dean, who coordinates all curriculum, policy, and institutional research that applies to students and faculty. Department chairs are responsible for course content within their academic units: Department of Command, Leadership and Management (DCLM), Department of Distance Education (DDE), Department of Military Planning, Strategy and Operations (DMSPO), and Department of National Security Studies (DNSS), both Core and elective, as well as working in concert with the Course Directors. Faculty within departments report to the chair. Teaching units bear the primary responsibility for instruction, although electives are offered by faculty within the institutes.

- *Curriculum*: What is taught within a course is the responsibility of the academic unit. Electives offered within that unit should first pass muster within the unit before moving to the curriculum committee. Expectations are that all courses offered for credit at the USAWC must meet the standards for graduate study appropriate to the field of study the course addresses. Reading lists, student work, and performance expectations must be clearly articulated and consistent with the courses' learning objectives.
- *Student Outputs*: The work we ask students to produce is designed to reinforce learning and lead to synthesis. The form these outputs take may vary according to a course's learning objectives. The bottom line is all courses should have a variety of student outputs (briefings, papers, case analyses, etc.) to afford students the chance to demonstrate learning and to accommodate difference in learning styles and inclinations.
- *Assessment*: Assessment of student performance is very important to quality educational programming. The opportunity for students to receive timely and frequent feedback is essential. Therefore, assessment mechanisms must be developed that allow for formal and informal feedback *throughout* the course. Criteria for assessment must be transparent to the reader.
- *Support*: Equally important is the idea that graduate faculty serve as mentors to students. This does not mean faculty merely validate student perceptions, beliefs or misgivings; it means we challenge students to think deeply about their questions, offer different perspectives, and encourage intellectual argument. You don't need to *believe* the position you may need to take when assuming this role, but you do need to do it.

The Institutes and Centers

There are four institutes and a center for applied study within the USAWC. The Strategic Studies Institute (SSI), the PeaceKeeping Institute (PKI), and the Army Physical Fitness Research Institute (APFRI) each perform research for the US Army. SSI has primary responsibility to the US Army staff in strategic analysis. APFRI has among the largest data sets on the health and wellness of men over 40. The Military History Institute (MHI) holds a large collection of books, manuscripts, photographs and other materials related to the history of the US Army and military history in general.

The Center for Strategic Leadership (CSL) is a gaming and simulation unit located in Collins Hall. They develop and deliver the Strategic Crisis Exercise, as well as perform other outreach and educational support functions. The Peace Keeping Institute, a unit within CSL, is chartered to focus on strategic and operational issues regarding Army participation in peace support operations.

Each institute and CSL offers electives within the USAWC curriculum. While faculty in the institutes and CSL are not *slated* faculty, and not all are *research* faculty, all are faculty members with some obligation for instructional responsibilities in the program. You should not hesitate to make linkages with colleagues in these places, both professional and personal, nor should you hesitate to send students to subject matter experts who are not among the slated faculty.

The Board and Committee System

Recently the Commandant instituted a system of interdepartmental coordinating boards to enhance opportunities for collaboration and communications among faculty. The Academic, Research and Publications, and Outreach boards comprise the system, membership includes representatives from each unit in the College. Their responsibilities include educational programming, research activities, and interface with external constituencies, respectively.

The Curriculum Committee is responsible for academic program oversight; all proposed credit-bearing courses must be vetted through this committee. The Library Advisory Committee is charged with oversight of the Root Hall library's (see below) collection, in support of the USAWC academic, research and outreach missions.

The Library

The USAWC Library is the primary local resource for student and faculty research. This library is linked to other libraries and research centers (military and other) and can access materials from a wide range of sources. The Library has established cooperative borrowing agreements with Dickinson College and Dickinson School of Law (Penn State) libraries; students and faculty at each institution may use the other facilities.

The Library is responsible for securing copyright permission for any materials used in class. This is important and will be covered in detail in your departmental orientations. During your visit to the Library you will receive a comprehensive overview of its resources and services.

The Directorate of Academic Affairs

The Directorate of Academic Affairs is an academic service and teaching unit reporting to the Associate Dean for Academic Policy. Within this unit are offices responsible for Concepts, Doctrine and Joint Education, Educational Technology, Course Scheduling, the Communicative Arts Program, and Institutional Research and Assessment. Briefly, these offices do the following:

- *Concepts, Doctrine and Joint Education*: Primary responsibilities of this office are ensuring that the USAWC curriculum meets expectations for joint military education, the Senior Service Fellows program, and the Graduate Assistance Program.

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- *Educational Technology*: The point of contact for all matters related to technology in the classroom. Additional responsibilities include forecasting technology needs, training, and facilitation of communication between educators and the technical staff.
- *Course Scheduling*: All scheduling time resides here. If you plan a program during the academic day, this office needs to clear it.
- *Communicative Arts Program*: Responsible for independent study programs, the SRP, and the Effective Writing course.
- *Institutional Research and Assessment*: Responsible for end-of-course student feedback research, institutional review of student, faculty and outside research, faculty development, and internship (other's students) programming.

As noted above, DAA is an academic service unit; its resources are available to faculty, departments and institutes as needed and appropriate. Generally, the unit's objective is not to direct actions but to encourage them through support, dialogue and development.

Greater Carlisle Area

The greater Carlisle community also affords resources for teaching and learning. In addition to borrowing privileges at Dickinson College, the faculty there and at the Dickinson School of Law (Penn State) may serve as guest lecturers for electives. The proximity of the USAWC to Gettysburg, with its college and the battlefield, and to the Penn State--Harrisburg campus, are equally useful in structuring our educational programming.

Chapter Three

Learner-Centered, Inquiry-Driven Graduate Study[2]

The predominant model of adult education identifies four basic concepts informing successful practice and efficacy in the field:

- *purposes* of education
- the shift from *instruction* to *learning*,
- impact of the particular *delivery system*
- *encouragement* of lifelong learning

An examination of these criteria should reveal their influence at the USAWC.

Purposes of Education

As summarized in the first chapter, the USAWC is designed to prepare proven operational and tactical leaders to function at a more conceptual, strategic professional level. This suggests students who come here should have a personal and a professional need to become more than what they now are. It is an opportunity to engage in a professional *transition*, an opportunity to explore ideas unexplored earlier in an individual's career. Ultimately we hope to achieve a professional *transformation* for our students through a shift in *how* leaders think about problems.

Shift From Instruction to Learning

At the USAWC we should not focus on *instruction* (the filling up of students with knowledge) but rather on *education* (the drawing out of understanding from the engaged learner). Our students seek some kind of change, an outgrowth of their prior professional and personal experiences. The catalyst for their learning is found in incorporating prior experience into the larger educational experience. As faculty, our responsibility is to avoid the inclination to *instruct*, to surrender to our particular subject-matter expertise. Accepting that we need not be *complete* subject matter experts allows us to engage in *education*, making effective use of others' experiences in class, in developing the ILP, and in shaping the SRP topic.

We need to become *reflective* practitioners. Like our students, we must seek to become more competent professionals (well grounded in both the practical and theoretical bases of the field), while acknowledging that these foundations are simply springboards for an on-going process of lifelong and self-directed learning.

Impact of a Particular Kind of Delivery System

The structure of the educational program is one of the most important factors informing the "shift from instruction to education". The USAWC's program structure, beginning with the ILP, through the core and elective courses, ending with the SRP, is a very particular kind of delivery system. (Although that system is moderated and mediated by technology when applied to the distance learning program, the philosophy of practice remains the same.)

First, we must take great care to ensure that the student understands he or she is largely responsible for the design of the individualized study plan. The individualized design should encourage introspection and reflection prior to fully embarking on a finalized program of study. In short, the ILP should be an organic document, allowing students to negotiate conflicts between their original expectations and emerging professional goals. Critical incidents in a student's experience are catalysts for developing a program of study leading to the hoped-for changes in perspective. These differ for each, but their incorporation into the program of study is critical. The dialectical relationship between reflection (what my experiences have taught me, as they relate to what I now know) and the educational process (the active incorporation of reflective experience into education) is the sum and substance of our work at the USAWC.

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[2] Adapted from John R. Goss, III, "Hermeneutical Dialogue: A Critical Component in Self-Directed Learning", in *Current Developments in Self-Directed Learning*, H. B. Long, ed., 1996, and "Adult Education, and Experiential and Self-Directed Learning", in *Developing Paradigms for Self-Directed Learning*, H. B. Long, ed., 1998.

Similarly, as a student moves through the program of study at the USAWC, he or she should become more empowered to make learning decisions that are individually useful. Their growing sense of professional competence, arising from the interplay of theory, experience and practice, should lead to a desire to take control of one's learning. The instructor naturally moves from a position of great authority to one of facilitation and perhaps finally to one of collegiality.

Encouraging Lifelong Learning

It has become almost a platitude that encouraging lifelong learning is a desired end state. The value of lifelong learning arises from the learning experience itself rather than from some preexisting recognition of its importance. Therefore to encourage lifelong learning, centrally important to critical and strategic thinking, we must *create a learning environment where students learn to learn*. Somewhere in a student's experience here something needs to happen--a transformation must take place where professional orientations gave way to recognition that learning has value in and of itself, and is not simply a means to a professional end.

The "seminar environment" is not the magic bullet that makes this happen. It is the instructor's facility within the seminar that makes the environment work. How does a faculty instructor (FI) do this? First FIs must require students to engage in *graduate* study. Second, they must clearly identify what students must know when they are done with the course (rather than what they would be able to *do* when they are done). The relationship of prior experience to the practice of reflection, leading to a new kind of experience (i.e., "what did I learn from that experience that may or may not be applicable now?") must become incorporated into the learner's "normal" way of living.

Experience and Graduate Education: Hermeneutics as an Organizing Concept

We are working against the grain here at the USAWC. Most schools seem to focus on *instruction*, couched in terms of "academic achievement" or "outcomes-based assessment", where the end product of *education* (learning facts) is seen as a more important measure of success than the process of *instruction* (learning to learn). To achieve a shift in focus from instruction to education requires more than simply stating that we are focusing on the process of education. It requires that we examine the philosophical foundations of our practice to ascertain how best the process of learning occurs.

One way to think about the transformational process we encourage at the USAWC is to reflect on one's prior experiences in the context of new experiences, and how we go about making sense of these. *Hermeneutics* is the philosophical study of how we make meaningful new experiences. If the USAWC is to be a transformational experience for students (and for faculty as well), this sort of reflection and reconstruction of our thinking is necessary. Two primary schools of thought seem useful for us as we consider this practice.

One school of thought suggests adult learners progress through several levels of interests as their knowledge level encourages the critique of their current social position. These levels, technical, practical and emancipatory, require different kinds of knowledge (instrumental, practical and reflective, respectively) and different ways of knowing (empirical-analytic, hermeneutic and critical thinking, correspondingly). Briefly:

- *Technical* interests deal with one's need to control and manipulate one's environment and are instrumental in nature. These interests dominate the educational/scientific world, where valid knowledge claims can be made only with reference to empirical reality. Education is treated as an *instrumental* end, with schooling and instruction its ultimate practice.
- *Practical* interests promote understanding individual interests as they relate to the interests of others, grounded in the mutual concerns of a given environment. Education is achieved in this context by linking what may seem one's individual, disparate interests and professional obligations to the common purpose of the USAWC. (For example, how does DMSPO's work in campaign planning contribute to the development of strategic thinking in policy arenas?) It is a process guided by specific criteria established for the process itself; that is the process at the USAWC is guided by our mission and vision statements.
- *Emancipatory* interests reflect an individual's desire to grow and develop, to move beyond the present state, and to explore the relationship between individual experience, the existing social environment and a desire for autonomy in thinking and action. Their goal is *critique*--of self, of situation and of society--thus the central importance of well developed critical thinking skills.

We urge students to engage their emancipatory interests. To get there, something should happen to them. What should happen at the USAWC, while initially addressing learner's technical interests, the emphasis must quickly shift to practical interests (the relationships among elements of a problem situation), leading, ideally to the student's appropriation of their emancipatory interests in the ILP and SRP.

Another view of the hermeneutical understanding reminds us that *interpretation* is always particularly-located, it exists in the context of the particular student's particular set of experiences at a particular time and place. *Knowing* results only after we first acknowledge what we can not fully know, and thereby open ourselves to others' perspectives and experiences. Knowing in this sense transforms the importance of events; meaning grows out of the newly revealed relationship between the whole and its parts. This is possible only if all the parties (students and faculty) are immersed in the event.

Implications For Self-Directed Learning

We cannot motivate anyone to engage in the *process* of education until something *instrumental* happens to them encouraging an examination of his or her technical interests. We cannot emancipate anyone until he or she first interprets how what is being learned works in concert with the larger social world (practical interests). Our emphasis must be on *the process* of learning, on *education* occurring at the critical intersection of need, experience and place.

Self-directed learning can be most effective only if educational programming prepares learners to take advantage of experience. Self-directed learning, to be effective, must allow the learner him/herself to grasp what is essential from the learning experience, based on the learner's own experience and understanding. Such a process encourages the shift from instruction to education, which is, in the end, both the necessary requirement for, and one of the intended outcomes of, self-directed learning.

Chapter Four

Teacher and Student Experience and Knowledge: Negotiating and Positioning

Students come to the USAWC with a wide range of experiences and knowledge. Some have been active duty military all of their careers; others are employees of federal agencies and may or may not have any professional military background; international fellows bring a completely different set of life, cultural and military experiences. In addition, different professional roles within the work environment provide another set of experiences distinguishing learners from one another. Faculty instructors bring similar diversity of experience and knowledge to the classroom. For some of us, our lack of experience and knowledge in specific fields may be somewhat intimidating. Often the question asked by a new teacher is, "What if they *know more than I do*?" We dread to learn the answer. Fear not. The fact is every student knows more than we do about something. It is normal. The question we should be asking instead is, "How can I capitalize on this diversity of student experience to make the course work?"

There are two kinds of knowledge and experience we need to be concerned with: formal knowledge (accepted or empirical facts) and experiential knowledge (learned from life). Formal knowledge is what is gained through traditional, formal education (what I learned in school); traditional means of credentialling mark its achievement (degrees, diplomas and certificates). This kind of knowledge tends to fall neatly into fields of study (political science, biology); we know the rules defining this knowledge set. Formal knowledge is believed to be generalizable (applicable to similar situations; predictable), but it is sometimes rejected when it contradicts when something different happens to *us*.

Experiential knowledge is less clearly defined. Experiential knowledge certainly is valuable and shapes how each of us approaches new problems and how we approach old ones. However, unlike formal knowledge, experiential knowledge is very *particularly located*; what we learn from experience depends largely on the experience itself, and its place in time and space. What I learn from an experience may be different from what you learn from a similar—but never identical—experience. Therefore, experiential knowledge is much less generalizable, but usually we believe it is very valid because it happened to us.

The challenge we face in experientially-informed graduate programs is the negotiation of formal and experiential knowledge and experience, and the respective roles of the teacher and the student in that process. A related, and probably preliminary challenge is the role that experience plays in the construction of the learning program (the curriculum). The following offers a suggested approach to understanding and negotiating these competing interests.

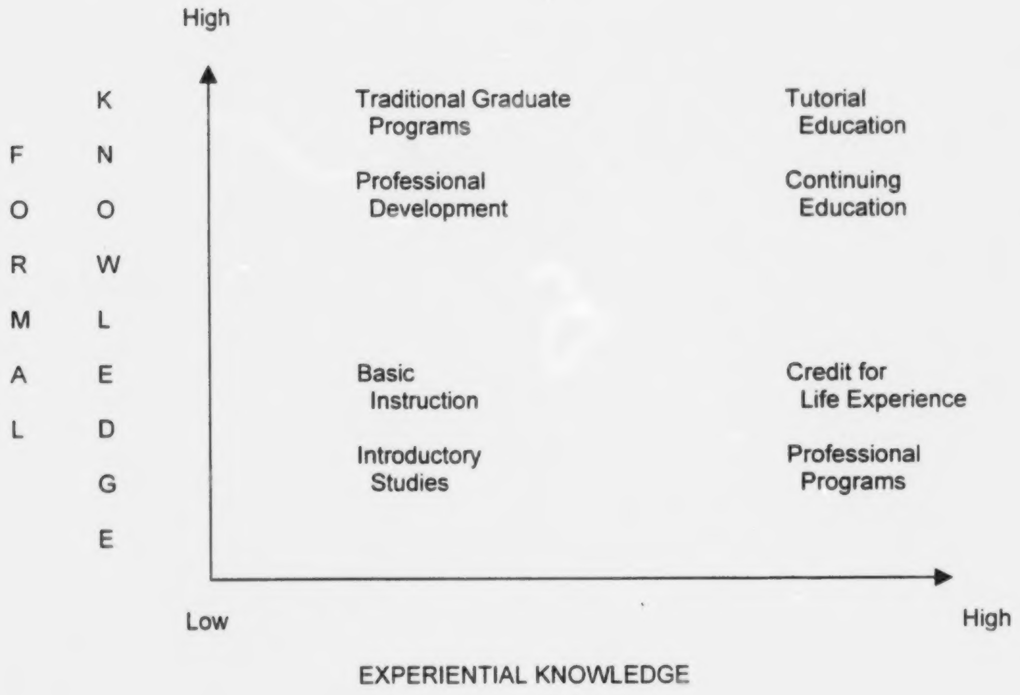
Formal Knowledge and Experiential Knowledge and the Structure of the Curriculum

The greater the emphasis placed on the learner's formal or experiential knowledge by a graduate program determines (or at least informs) how that program works in the classroom. If we assume the learner comes to the program an empty vessel, then learners need to be filled with knowledge (formal). If it is assumed the learner's prior experiential knowledge plays a role in his/her subsequent learning, the student is seen as someone in need of guidance and mentoring to reframe prior understanding (education) to conform emerging knowledge to formal concepts.

It states that the role of the teacher changes as the engagement with knowledge changes. Emphasis on *formal knowledge* requires teachers to be *content experts*; emphasis on *experiential learning* requires teachers to be *process experts*. In the former, teachers *instruct*; in the latter, teachers *educate*.

Figure 3 illustrates the relationship between formal and experiential knowledge and program structure. For example, the greater the emphasis placed on formal knowledge (upper left in the figure) with little attention paid to experiential knowledge (lower left), the more likely the program will look like a traditional graduate program (schedules of classes, strict courses of study, the transmission of knowledge). By contrast, programs placing great emphasis on prior life experiences and less on formal learner knowledge tend to be programs designed to award students academic credit for life experience (mostly at the undergraduate level).

Figure 3: PRIOR KNOWLEDGE AND EXPERIENCE OF THE LEARNER



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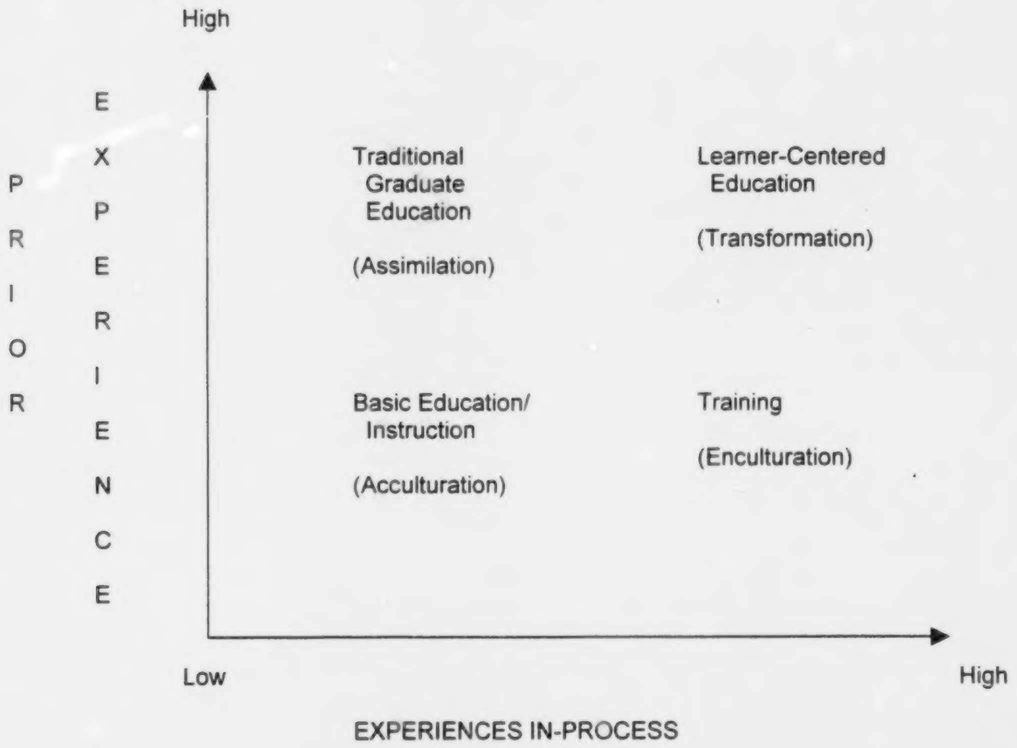
Qualities of *experience* needing consideration are differences in *prior* life experience and experiences the student has *in-process*, during the course of study. Figure 4 illustrates the relationship between these kinds of experience, shaping the goals of the academic programs. If high priority is placed on prior experience with little attention to in-process *experience* (upper left of Figure 4), the goal of the program is *assimilation*, or bringing new members into the profession or field. Basic education assumes little prior or little in-process experience, whereas training relies upon a high degree of in-process experience and assumes less prior experience in the field. *Acculturation* (teaching the rules of the group) and *enculturation* (teaching those who are of the group new skills) represent social maintenance activities of the educational organization. The goal of learner-centered education (upper right in Figure 4), however, is *transformation*, linking prior learner experiences with a high level of in-process experiential learning. Transformation in this respect seeks to encourage the learner to re-think prior experiences and to think differently about new experiences in light of that reflection.

Figure 4: APPLICATION OF EXPERIENCES OF THE LEARNER



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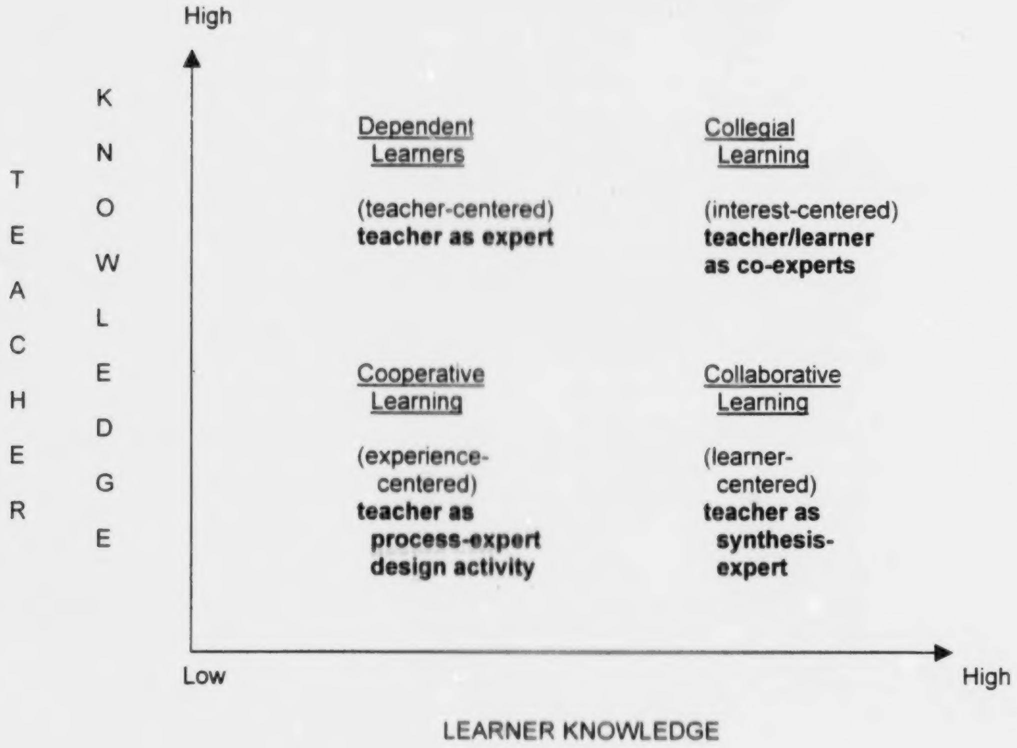
Teacher and learner knowledge (formal and experiential) and their inter-relationship is the last aspect of needing examination. Figure 5 illustrates that relationship and how it informs the professional interaction between teachers and learners. This relationship is itself informed by how the institution views the role of formal or experiential knowledge with regard to faculty and students. If teachers hold high levels of knowledge, and the institution supports a practice of hiring based on this knowledge, and learners are believed to hold little prior knowledge, the result is an educational environment characterized by dependent learners and expert teachers (upper left). It is a teacher-centered environment. Experience-centered learning tends to happen when teachers are seen as process-experts, skilled in the design of learning activities, where students engage in activities with one another, facilitated by the teacher (lower left). Collaborative learning (lower right) sees the teacher as a synthesis-expert, skilled in drawing together disparate theory and experiential knowledge, creating *new knowledge* in conjunction with learners. This is where most of what the USAWC does falls. Ultimately teachers and learners move to the upper right quadrant of Figure 5, collegial learning (interest-centered learning), where both become simultaneously teachers and learners.

Figure 5: RELATIONSHIP OF TEACHER/LEARNER KNOWLEDGE LOCATION OF EXPERIENCE AS ELEMENT OF LEARNING



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What Does This Mean at the USAWC?

These models help to illustrate some of the relationships you will experience as a faculty member here during each academic year. The curriculum begins with the four Core courses, laying the foundation for learning at the next level. The content of the Core is something all must grasp. As such, formal knowledge is more fully vested in the faculty (as they know what learners *must* know), and experience is used to rehearse skills derived from this foundational knowledge base. We behave much like a traditional graduate program during the Core (Figures 3 & 4). We are trying to assimilate learners into the milieu of the strategic thinker. Teacher-learner relationships, however, tend to reside between the "teacher-as-knowledge-expert" and "teacher-as-process-expert". Modeling behaviors (that is, *being, thinking and behaving as we expect students to be, think and behave*) is an important responsibility for faculty teaching in the Core; modeling is more important in Course 1 and becomes less important as students move toward Course 4. Students become more sophisticated learners, they have practiced and internalized skills in strategic thinking and conceptual modeling.

Similarly, the curriculum moves in a counter-clockwise manner around these figures. Course 1 is an introduction to strategic thinking and leadership at the strategic level. It is designed to break whatever bands may be limited students' thinking as a result of work in other environments and in other outcome domains. Course 2 introduces students to a new field of study (for many), capitalizing on newly acquired thinking skills. The same process should apply as students move through Courses 3 and 4. At the end of the Core, the SCE is designed to integrate the foundational learning in a simulation requiring the application of these new skills. Ultimately, the electives and the SRP afford opportunities for students to engage their particular interests, in light of the ILP and their future professional roles.

Faculty in the latter part of the Core and in the electives, not to mention those working with the Strategic Crisis Exercise, need to move their practice from the "teacher-as-process-expert" to the "teacher-as-synthesis-expert" as student skills and sophistication improve. Electives, by and large, should conform to a learner-centered approach (collaborative learning) where teachers help learners synthesize information to create new understandings of old problems.

Empirical support for this approach to teaching and learning is abundant in the literature on higher education. One recent example from the Center for Research on Education, Diversity and Excellence at the University of California—Santa Cruz has identified five standards for professional practice in a learner-centered environment[3]:

- Facilitate learning and development through joint productive activity among leaders and participants. Teaching and learning are social not individual activities. Learning happens when novices and experts work together to produce a common product. The focus is on legitimate collaboration.
- Building a language of the learning community is required in order to create the environment we want. This means we must agree to the definitions (and subsequent practices deriving from them) of "critical thinking", "strategic leadership", "policy", and so forth. Teachers must work to instill that vocabulary in their students. Jargon should not be confused with a professional vocabulary, particularly in this learning environment, which is joint, interagency and international in character. The USAWC has a professional vocabulary distinct to this place.
- Place teaching and learning in the context of learners' particular experiences and skills; all new learning must be linked to what students already know. This is challenging in the USAWC environment where our students are diverse in very particular ways: they share much, but that is very broad, and they may know little of others' professional lives. Real concerns best serve as foci for contextualization of learning, problems encountered in everyday life. (The relationship of this standard to the use of cases seems contradictory, and it will be addressed later.) It may be messy, but it is effective.
- Challenge participants to develop more complex solutions when addressing problems. This may be seen as "sustained problem-solving opportunities rather than short-term exercises designed to address simple issues."
- Engage participants through dialogue, instructional conversation. This standard corresponds to the discussion above of the "hermeneutical dialogue", a "blend of deliberate, planned teaching with more interactive, responsive conversation". This dialogue allows opportunities

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[3] *Standards for Professional Development: A Sociocultural Perspective*, University of California—Santa Cruz, December 1998.

for ongoing teacher intervention with students (*asking probing questions* as distinct from *correcting wrong-headed notions*), as well as linking formal knowledge to experiential.

Teaching in a learner-centered, inquiry-driven environment is difficult, untidy and confusing. It is also professionally rewarding, intellectually dynamic and synthesis intensive. The instructional environment of the USAWC is all of those things. Your primary objective is to allow learners as much freedom to explore as they can handle while ensuring they stay on the general intellectual track required by the curriculum. The greatest mistake a teacher can make here is to hold the reins too tight.

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Chapter Five

Collaborative Learning

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He has led colloquia like this at Bard College, Brown University, Bucknell University, New York University, University of Minnesota, University of Colorado, University of Pennsylvania, and Yale University, and at the Woodrow Wilson Foundation.

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Bruffee, Kenneth A. (following).

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Collaborative Learning

Higher Education, Interdependence, and the Authority of Knowledge

Kenneth A. Bruffee

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CHAPTER ONE

Collaboration, Conversation, and Reacculturation

Once upon a time, many years ago, a time when the youngest faculty member at most colleges and universities today had not yet entered puberty, a young assistant professor at one of those colleges was assigned a task that was in those days de rigueur for low level English Department types. He was asked to become Director of Freshman English. Feeling flattered, having a modicum of interest in teaching writing, but lacking even the most rudimentary sense of caution, and in any case not having a great deal of choice in the matter, he agreed. The year was 1971. The college was Brooklyn College. The young assistant professor was me. And at the City University of New York, of which Brooklyn College is a constituent campus, 1970 turned out to be the first year of open admissions.

In open admissions, some 20,000 new students, many of them lacking the basic skills of reading, writing and mathematics needed for college work, entered the City University of New York. These new students challenged the university's faculty in ways that often far exceeded the experience, training, and expectations of scholars and scientists bred in the quiet intensity of library carrels and research labs. To most of us it felt like a rout.

My job as the new Freshman Comp Director was to organize, more or less from scratch, a program of courses in writing at all levels, remedial to advanced, that would meet the needs of those new students, teach freshman composition and a literature survey course, teach my English Department colleagues how to teach remedial writing and freshman composition to the college's new unprepared students, and manage upwards of 108 composition instructors teaching some 160-odd sections each term.

I don't mind admitting I was soon desperate. I thought wistfully about that manuscript sitting half-finished on a shelf in my study, a truly splendid book of literary criticism about the great monuments of modern fiction, and my pellucid lecture notes on Wordsworth and the English

Romantics yellowing away in a drawer, unthumbed, unreferred to, unapplauded.

In my state of confusion and despair, it occurred to me that there must be other people in my shoes on other City University campuses—CCNY, Hunter, Queens, somewhere. Surely they must be coping better than I. I had never heard of any of them, and they had never heard of me. But surely someone in this anonymous crowd would help me understand and accomplish the seemingly impossible task I had committed myself to. I called them up. They all claimed that they too were desperate. Warily, we agreed to get together for a beer.

They did help me, as it turned out, but not quite the way I had expected. I thought I would ask some questions and they would provide the answers. But it wasn't long before we were all startled to discover not just that none of us had any answers, but that none of us even knew the right questions.

It bears witness to our collective state of mind that we found this appalling discovery refreshing and provocative. The tedium of petty college and university administration had unaccountably coughed up an intellectual challenge. We decided to meet again and talk some more. We began converging Saturday mornings on a mutually convenient Manhattan coffee shop. We also met several times at a wonderful soup shop that had just opened on Fifth Avenue called La Potagerie. We had a pretty good time. To focus our discussions in the midst of all this medium-high living, we decided to give ourselves some reading assignments. We chose several books and articles that one or another of us had run across in some context or other and that seemed to offer some help in looking at the needs of our students, if possible in a larger than merely academic context.

Working together in this way, we gradually began to make some striking discoveries about our students, ourselves, and our profession. In fact, what we found out about our students was not unlike what we found out about ourselves and our profession.

One of the first things we read together was Sennett and Cobb's *The Hidden Injuries of Class,* a book that talks about families of blue-collar workers living in and around Boston. These families had a lot in common with the family I had grown up in and, as we eventually learned from one another, with the family life many of us in the group had experienced. They also had a good deal in common with the families of the students we were now teaching. One of the first and most important things that Sennett and Cobb suggested to us was that teaching writing to open-admissions students might raise issues that were more profound than simply how to "correct errors." Teaching writing might in fact involve an issue that seemed altogether beyond our professional training and expertise to understand: acculturation.

It began to dawn on us, in short, as we read and talked about what we read, that our students, however poorly prepared academically, did not come to us as blank slates. They arrived in our classes already deeply acculturated, already full-fledged, competent members (as we were, too) of some community or other. In fact, they were already members of several interrelated communities (as we were, too).

If that was the case, we concluded, then in the first instance the way our students talked and wrote, and even the way they behaved in class, did not involve "errors" at all. They talked, wrote, and behaved in a manner that was perfectly correct and acceptable within the community they were currently members of. The way they talked, wrote, and behaved was "incorrect" and unacceptable, we found ourselves saying, only in a community that they were not—or were not yet—members of. The community that the students were not yet members of and were asking to join by virtue of committing themselves to attend college was of course the (to them) alien community of the "literate" and the "college educated." In a word, us.

Beginning to describe our students in this new way, we also began to talk about our job as their teachers in a new way, a way that differed strikingly from the way we were in the habit of talking about college and university teaching. If how our students talked, wrote, and behaved was not in the first instance a matter of "error," we began to say, then perhaps our job as teachers was not in the first instance to "correct" them. We recognized, of course, that what the community of the "literate" and the "liberally educated" regarded as correct and incorrect talk, writing, and behavior remained an issue. But what we were now saying was that in the first instance our job as teachers was to find ways to begin and to sustain a much more difficult, painful, and problematical process than "correcting errors" in our students' talk, writing, and behavior. Our job as teachers, we were saying, was to find out how, in some way and in some measure, to reacculturate the students who had placed themselves in our charge.

The way my colleagues and I were beginning to talk about college and university education was not only new to us, it was entirely different from the way our disciplinary colleagues on our home campuses still talked about it. Increasingly, we found, they failed to understand what we were saying. As a result, we felt less and less comfortable with those at home and abroad to whose professional company, values, and goals we had committed ourselves as graduate students. It seemed like a pretty risky situation to most of us, and would have seemed even riskier except for our realization that we were feeling more and more comfortable with one another. In short, we began to be aware that the change in the way we talked about what we were doing signaled a cultural change in ourselves, about which we were deeply ambivalent.

In fact, I would say now, the change in the way we talked about college and university education was more than a signal of change. Change in the way we talked was the cultural change itself that we were undergoing. The language we had begun to use literally constituted the small transition community of which we were now increasingly devoted members. Learning, as we were experiencing it, was not just inextricably related to that new social relationship among us. It was identical with it and inseparable from it. To paraphrase Richard Rorty's account of learning, it was not a shift inside us that now suited us to enter new relationships with reality and with other people. Learning *was* that shift in our language-constituted relations with others.

To further this process of cultural change we were experiencing, another text we assigned ourselves was Paulo Freire's *Pedagogy of the Oppressed*. This book is about teaching reading and writing to the illiterate poor in Brazil, and it has an unmistakably Marxist slant. Now, I don't think anyone in our group would have called us Marxists. Observing us lunching on parmentier and Perrier water at La Potagerie, no outsider would be ineluctably driven to that conclusion. For the most part we shared a bias that was fairly typical of the early-nineteen seventies academics that we were: a bias that was mostly white, mostly male, and solidly American middle-class.

Despite that bias, however, we were fully aware that there was a sense in which many of our students were forced to pursue postsecondary education, largely through economic pressure, by a society that paid workers better who were literate in the standard dialect of English than those who were not literate in it. A job at the telephone company turned up as a point of reference, and a high proportion of those who even today fail the New York Telephone Company employee entrance exams suggests that that was not a wholly unrealistic criterion. And one thing we learned from Freire was that our middle-class American goal of establishing literacy in the standard dialect was shared by at least one person whose basic political assumptions differed quite a bit from our own.

Stirred by these concerns, our discussion of Freire began by addressing the troubling key word in his title, the term "oppressed." I think we all found it somewhat melodramatic as applied to open-admissions students. But we had to admit also, without casting aspersions as to the source of that condition, that to say that our students existed in a state of "oppression" was not entirely inappropriate. Sennett and Cobb had taught us that our students had been acculturated to talk to and deal effectively only with people in their own crowd, their own neighborhood, perhaps only in their own family or ethnic group.

Their worlds were closed by walls of words. To be acculturated to those perfectly valid and coherent but entirely local communities alone had severely limited their freedom. It had prepared them for social, political, and economic relations of only the narrowest sort. It had closed them out of relations with other communities, including the broader, highly diverse, integrated American (or for that matter, international) community at large represented in a perhaps minor but (from their point of view) not insignificant way by a job at the New York Telephone Company.

One result of this exclusively local acculturation appeared to be that many of our students could not discover their own buried potential and could not achieve the more economically viable and vocationally satisfying lives they aspired to. We suspected (given our middle-class, professional, liberal-humanistic bias) that our students' acculturation also prevented them from living lives that were intellectually, emotionally, and aesthetically fulfilling. We realized furthermore that this was not exclusively an "open admissions" problem. Parochialism of undergraduate experience and thought is a problem that, on William Perry's testimony, is not unknown even among undergraduates at Harvard College.

So, although we knew that what Freire meant by the key word in his title, "oppressed," was not exactly what we meant by it, to the extent that our more liberal sense of the word did correspond with Freire's intent, it led us in a useful direction. In order to make any positive impression at all on the students we were encountering in our classes, it was clear that we too needed a pedagogy of the "oppressed," even in our more pallid sense of it.

The pedagogy that Freire offered turned out, furthermore, to be something we had come across before in our reading and would come across again, used to accomplish a similar end. The feminist movement of the sixties and seventies, for example, had used this pedagogy to help women change their attitudes toward themselves and to reconstruct their role in society. Kurt Lewin had used it to help people accept dietary changes caused by food scarcities during World War II and to liberate children and adolescents who had been raised as Hitler Youth. A pedagogy that could relieve or overcome "oppression" in many relevant senses, we began to see, would inevitably be a pedagogy of reacculturation: a pedagogy of cultural change.

Freire, in fact, went well beyond leading us toward considering the possibility that a pedagogy of reacculturation could meet our needs. He and others also told us something about what a pedagogy of reacculturation might be, and how it might work. We learned first that reacculturation is at best extremely difficult to accomplish. It is probably next to impossible to accomplish individually, reacculturation fantasies such as *The Taming of the Shrew* and *Pygmalion* notwithstanding.

What does seem just possible to accomplish is for people to reacculturate themselves by working together. That is, there does exist a way in which we seem able to sever, weaken, or renegotiate our ties to one or more of the communities we belong to and at the same time gain membership in another community. We can do that if, and it seems in most cases only if, we work collaboratively. What we have to do, it appears, is to organize or join a temporary transition or support group on the way to our goal, as we undergo the trials of changing allegiance from one community to another. The agenda of this transition group is to provide an arena for conversation and to sustain us while we learn the language, mores, and values of the community we are trying to join.

In short, this pedagogy of reacculturation had been right under our noses all along. What we had been doing ourselves was exactly that. We ourselves were engaged in the complex, tortuous, wearing, collaborative process of reacculturation. Faced with a situation that seemed alien to us and which our training as conventional academic humanists, library mice, and English-teacher types did not prepare us to cope with, we had in self-defense recognized the degree of affinity that existed among us, on that basis formed a transition group, and assigned ourselves tasks to do collaboratively. We read. We met regularly. We treated ourselves well and had a good time. We got to know one another. We talked. We wrote, and we read one another's writing. We even managed to get some of it into print.

We learned a lot from reading, of course. That was because reading is one way to join new communities, the ones represented by the authors of the texts we read. By reading, we acquire fluency in the language of the text and make it our own. Library stacks from this perspective are not a repository; they are a crowd. Conversely, we make the authors we have read members of our own community. Our little discussion group had, in effect, adopted Sennett and Cobb and Freire into membership.

But although we learned a lot from what we read, we learned a lot more from what we said to one another about what we read. Each of us began to change, and we discovered that the most powerful force changing us was our influence on one another. In the process we became a new community. It was a knowledge community in which its members talked about college and university education as quintessentially reacculturative and talked about reacculturation as quintessentially collaborative.

Not everyone has gone through an experience of boundary conversation and collaborative reacculturation quite as extensive and long-lived as the one in the tale I have just told. But the essence of it will be familiar to anyone who has been in a mutual-aid self-help support group devoted to a special interest or disability. Groups of this sort concentrate on solving or dealing with a formidable problem. They constitute in many cases a transition community between small, isolated communities of despair (such as alcoholics or families of alcoholics, those who take care of cancer victims or victims of Alzheimer's disease, battered women, and so on) and a larger community of more confident, more knowledgeable, more competent, and a good deal less lonely people who can cope. Group members distribute knowledge and authority among themselves, taking it upon themselves to help each other in times of threat and calamity to find the will and the way.

The essence of collaboration will even be familiar to those who have worked with an intelligent, compatible committee or task force on an interesting, demanding project. People in groups of this sort assume one another's will to do the job. They concentrate instead on a way to get the job done. One person gets an idea, stumbles around with it a bit, and then sketches it out. Another says, wait a minute—that makes me think of . . . A third says, but look, if we change this or add that . . . People who take part in a collaborative enterprise such as this exceed, with a little help from their friends, what no one of them alone could have learned, accomplished, or endured.

Collaboration will be familiar, too, to lawyers, journalists, accountants, science and technical writers, and others who have ever asked colleagues to read a manuscript of theirs or who have ever "done an edit" (as my wife the lawyer puts it) on something a colleague has written. Constructive readers of that sort read a draft, scribble some notes in the margins, maybe write a page or two of comments congratulating the writer on a good start, suggest a few changes, and mention one or two issues to be thought through a bit further. Then the two of them, reader and writer, sit down together and talk the draft over before the writer goes back to work on it.

If I am right that experiences of this kind are familiar to many people, then few are likely to be strangers to reacculturation by means of collaboration. When shopkeeper A asks shopkeeper B to take a look at the way she has rearranged the floor of her shop, and A agrees to do it, they become an autonomous collaborative group of two with the task of revising and developing the product of one of its members. The collaboration is worthwhile for both of them for two reasons. As members of the same, concentric, or overlapping communities of interest and expertise, they speak much the same language. And as members of different communities or subgroups, they look in upon each other's communities with the uncommitted eyes of outsiders. Both know in general what it takes to display wares in an attractive way, but shopkeeper B doesn't know much about handling the particular line of goods that A is selling. B will understand and agree with some of what A has done with her store but will raise questions about other things. Challenged, A will translate unfamiliar terms and ideas into language that B can more or less understand and accept. They will come to terms, reach a consensus.

The same sort of thing happens when anyone, even a college or university student, works collaboratively. With material his students generated in a course he taught collaboratively some years ago, John Trimbur shows what happens in such a collaborative group.[1] The assignment was to read a Studs Terkel interview with a former Ku Klux Klan leader who had reversed his position, coming in the end to agree with Martin Luther King. While the students were reading, thinking, and discussing, they were to keep a personal log. Trimbur first asked them to discuss the piece in small, task-oriented groups of the sort I describe in Chapter 2. Then he asked them to go home and write an essay explaining that change, all the while keeping track of their thinking and their class discussion in their logs. He tells the rest of the story this way.

> One woman wrote in her log that at first she couldn't think of anything to say [about the Terkel interview]. She found the assignment difficult because she did not want to "judge" the guy. She went on quite a while in this entry to say how in her family she had been brought up not to "judge" other people.

Notice that the student herself (I'll call her Mary) attributes her difficulty in discussing the subject to the way she had been acculturated in the first place: the way "in her family she had been brought up." Mary's teacher was asking her to talk about something beyond the boundaries of the knowledge community she belonged to. Trimbur continues:

> Then, in a log entry written a few days later, she wrote again about the class hour when we discussed the Terkel piece and the writing assign-

> ment. What she remembered now was something that another woman in the class had said about "conversion." She found herself "talking it over" with that woman in her mind, and as she talked it over she began to connect the idea of conversion with the story of Saint Paul in the Bible. Making this connection was a dramatic event for her, as the entry describes it. "Dramatic" is not too strong a word for the experience, because it actively involved an imagined conversation with a classmate. Once that event occurred she felt ready to write and interested in what she had to say.

One thing this passage tells us is that change—reacculturation, learning—began for Mary when she engaged in conversation with a peer at the boundary between the community she was brought up in and the community her classmate was brought up in. Her classmate shared part of her cultural background, the religious part, but did not share another part of it, the antijudgmental part. In this conversation, Mary's peer provided the new word that allowed her to talk about the topic she had been assigned. She interposed, helping her to "translate" a word she was familiar with (*conversion*) from a strictly religious context to a secular one. Then she internalized this boundary conversation with her peer and continued it on her own, in her imagination, as thought.

After direct conversation ended for Mary, collaboration continued indirectly, because direct conversation had provided the language she needed in order to "talk to herself"—that is, think—productively in a new way. As it had for my colleagues and me, boundary conversation had given Mary the means for crossing that boundary. It gave her the terms with which to renegotiate her relationship with two communities, the one she was brought up in and the one she was entering by virtue of her college education.

Another thing the passage tells us is that at the same time that conversation, external and internalized, changed Mary's opinion, it also changed her feelings about the topic, about the conversation, and about herself. It made her feel "ready to write and interested in what she had to say." Her early acculturation into one community (being "brought up not to 'judge' people") made her reject the whole idea being presented in the Terkel interview. Conversation changed this attitude to a willingness to entertain the idea. It also let her formulate a new opinion and want to write about it.

In recording that change and its educational consequences, this student has recorded the crucial step in educational collaboration, the first step we take whenever we set out to join a larger, more inclusive community of knowledgeable peers. That step is to overcome resistance to change that evidences itself as ambivalence about engaging in conversation at the boundaries of the knowledge communities that we already belong to. As Roberto Unger tells us, we are drawn to one another and distrust one another at the same time. We want to get to know one another, but we are disinclined to talk with strangers. We continue to resist and feel uncomfortable with one another, until we find terms that we feel are translatable, terms that we know are appropriate and acceptable in the community we currently belong to and that we can also displace in acceptable and appropriate ways into the community we are tempted to join. In Mary's case, the term that served this purpose was "conversion." In the case of my City University colleagues and me, the same purpose was served by terms such as "culture," "reacculturate," and "oppressed."

This transitional process of translation, this willingness to learn the elements of new languages and gain new expertise, is the most important skill in the craft of interdependence. It is a willingness to become members of communities we have not belonged to before, by engaging in constructive conversation with others whose background and needs are similar to our own but also different. Reacculturative conversation of the sort exemplified in the tale that begins this chapter combines the power of mutual-aid self-help groups with the power of successfully collaborative intellectual work. It integrates the will and the way. And as we shall see in Chapter 2, in this process of arriving at consensus, dissent may also play an important, sometimes even decisive, role.

To be able to engage in constructive, reacculturative conversation, however, requires willingness to grant authority to peers, courage to accept the authority granted to one by peers, and skill in the craft of interdependence. This book takes the position that a good college or university education fosters that willingness, courage, and skill, but that many college and university educations today, widely regarded as very good indeed, do not in fact foster them.

Understanding the importance of conversation to college and university education began in the late 1950s with M.L.J. Abercrombie's research on educating medical students at University Hospital, University of London. Abercrombie showed that her medical students learned the key element in successful medical practice, diagnosis—that is, medical judgment—more quickly and accurately when they worked collaboratively in small groups than when they worked alone.

A close look at Abercrombie's results in light of Mary's experience is revealing. Abercrombie began her work by observing the scene that most of us think is typical of medical education: the group of medical students with a teaching physician on "rounds," hovering over a ward bed to diagnose a patient. She changed that scene by making a slight but crucial difference in the way it is usually played out. Instead of asking each individual member of the group of medical students to diagnose the patient on his or her own, Abercrombie asked the whole group to examine the patient together, discuss the case as a group, and arrive at a consensus: a single diagnosis that they could all agree on.

The result, that students who learned diagnosis collaboratively acquired better medical judgment faster than individual students who worked alone, showed that learning diagnostic judgment is not an individual process but a social, interdependent one. It occurs on an axis drawn not between individuals and things but among people. Students learn judgment best in groups, Abercrombie inferred, because they tend to talk each other out of their unshared biases and presuppositions. That is, the differences among them push them into socially justifying their beliefs or, failing that, into acknowledging that their beliefs are socially unjustifiable and abandoning them.

This is also the message of Uri Treisman's work at the Berkeley campus of the University of California, for which he has won the Dana prize and a MacArthur Fellowship. On that polyglot, multiethnic campus, Treisman, who is a mathematician, was puzzled by the fact that students in some ethnic groups did significantly better at math and science than students in other ethnic groups. In particular, Asian-American students at Berkeley tended to excel, whereas African-American and Hispanic students tended not to.

To find out why, Treisman devised an elegantly simple experiment. He followed the Asian-American students around campus to see how they did it. What he discovered was that they were continually engaged in conversation about their work. They moved in packs, ate together, studied together, went to classes together. In contrast, the African-American and Hispanic students Treisman watched were largely isolated from one another. They seldom studied or talked together about their work.

Treisman surmised that this was the crucial difference between the academic success level of these two groups of students. So he set out to change the way in which Berkeley's remedial math and science program was organized. He brought the African-American and Hispanic students together, gave them a place to study collaboratively, showed them how to work together effectively, and insisted that they work collaboratively on a regular basis. Lo and behold, many of Treisman's "remedial" students soon became B and A students. Conversation, Treisman discovered, is of such vital importance to learning that, with it, any of us has a shot at doing whatever we want to do. Without it, none of us stands a chance.

Institutionalized educational collaboration in whatever form, however, is never unproblematical. It almost always involves an attempt on the teacher's part to reacculturate students at several levels. Reacculturation extends beyond initiation into a disciplinary community of mathematicians, sociologists, or classicists to initiation into a community of willingly collaborative peers. A class must somehow manage to constitute itself as a community with its own particular mores, goals, linguistic history, and language.

This process is not always easy, because students do not always work effectively as collaborative peers, especially at first. There are several reasons for this. First, given most students' almost exclusive experience of traditional classroom authority, many have to learn, sometimes against considerable resistance, to grant authority not to the teacher alone but to a peer ("What right has he got . . . ?") instead of the teacher. They also have to learn, sometimes against considerable resistance, to accept the authority given them by a peer ("What right have I got . . . ?") and to exercise that authority judiciously and helpfully in the interest of a peer.

Any teacher who has asked students to criticize one another's work without preparing them to do it has seen resistance of both kinds. Students' first reaction to being asked to comment on another student's work is almost invariably to interpret it as an invitation to rat on a friend: mutual criticism as a form of treason. If the teacher does manage somehow to break through this refusal to comment on another student's work except in the blandest terms, the alternative reaction goes to the opposite extreme: almost vile excoriation. At first students refuse to admit that they see anything wrong with a fellow student's work. Then they refuse to admit that there is anything of value in it at all. They become, as a student once put it to me, either teddy bears or sharks. Both responses are typical of group solidarity, which tends to enforce loyalty and mutual defense and to scapegoat some members of the group, ejecting them and closing ranks against them. Needless to say, neither response is likely to develop the craft of interdependence and lead to mature judgment.

These typically solidarian responses show that most college and university students have thoroughly internalized long-prevailing academic prohibitions against collaboration. Traditionally, after all, collaboration skates dangerously close to the supreme academic sin, plagiarism. Furthermore, most college and university students are confirmed in the habit of identifying the authority of knowledge in a classroom exclusively with the teacher's authority. As a result, they often do not believe that a request to collaborate is genuine, and they do not always know what might be in it for them if they did collaborate.

Of course, even in a collaborative classroom, authority does begin in most cases (as it should) with the institutional representative or agent, the teacher. Mary and her classmates did not read and discuss Studs Terkel on their own initiative. Their teacher asked them to do it. Furthermore, most students start most semesters in most classrooms as strangers. They do not begin, as shopkeepers A and B did, as trusted neighbors, colleagues, or friends. They begin with the wariness of one another that my City University colleagues and I began with. And, semesters being short, students do not have the kind of time that we had to get to know and trust one another. It is therefore not surprising that some students may not be overly eager at first to collaborate, and that a few may remain skeptical.

But the experience of skillfully managed classroom collaboration can help move students toward incorporating into their intellectual work much of what they have learned about working interdependently in their many collaborative experiences outside class. For students who are inexperienced in collaboration, a series of modestly challenging tasks can, over time, give them a chance to discover the value, interest, and often in fact the excitement that they can derive from interpreting tasks on their own and inventing or adapting a language with which to negotiate the consensus that they need in order to get the work done. With the instructor for the moment out of the way and the chain of hierarchical institutional authority for the moment broken, most students enjoy the freedom to reinvent in class the collaborative peership that most of them are quite familiar with in their everyday lives. Chapter 2 will illustrate with one kind of collaborative learning how the process works.

CHAPTER TWO

Consensus Groups: A Basic Model of Classroom Collaboration

One model of collaborative learning, although by no means the only one, is classroom consensus groups. In consensus groups people work collaboratively on a limited but open-ended task, negotiating among themselves what they think and know in order to arrive at some kind of consensus or agreement, including, sometimes, agreement to disagree. In organizing these groups, teachers typically do four things:

- They divide a large group—the class—into small groups.
- They provide a task, usually designed (and, preferably, tested) ahead of time, for the small groups to work on.
- They reconvene the larger group into plenary session to hear reports from the small groups and negotiate agreement among the group as a whole.
- They evaluate the quality of student work, first as referee, then as judge.

Organizing small consensus groups is not hard to do. But satisfactory results require college and university teachers to behave in their classrooms in ways that strike many who are used to traditional teaching as at best unusual. The nitty-gritty of this process of social organization can look trivial on the page. But it adds up to fairly sophisticated expertise that includes some familiarity with the research on "group dynamics," some forethought, some sensitivity to social situations and relationships, a somewhat better-than-average understanding of what is being taught, and self-control.

This chapter describes what happens in a typical consensus-group class and outlines some of the relevant research. It explains what goes into designing a good collaborative learning task. It explains how teachers draw a collaborative class back together to develop a consensus of the whole. And it explains how they evaluate students' individual contributions to the class's conversation through the students' writing.

A collaborative class using consensus groups goes something like this:

After explaining what's going to happen, the teacher divides students into groups of five or six. This usually means that the teacher acts a bit like a social director at a vacation resort or summer camp, counting students off, wading in to help them rearrange chairs, separating groups to minimize noise from other conversations, and encouraging group members to draw close enough together to hear one another over the din and to make the group more likely to cohere.

Then the teacher gives students a sheet with a task and instructions on it. An alternative is to pick out a passage of text as it appears in a book that all the students have at hand and write questions and instructions on the blackboard. (Later in this chapter I will explain what is distinctive about collaborative learning tasks and offer suggestions for designing them.)

Once students are settled in their groups, teachers ask them to introduce themselves (if necessary) and decide on a recorder, a member of the group who will take notes on the group's discussion and report on the consensus the group has reached when the work is over. As the small-group work starts, the teacher backs off. Emphatically, the teacher does not "sit in" on consensus groups, hover over them, or otherwise monitor them. Doing that inevitably destroys peer relations among students and encourages the tendency of well-schooled students to focus on the teacher's authority and interests.

If a teacher's goal is productive collaboration among peers, closely monitoring student small-group discussion is self-defeating. That is because the message that teachers deliver when they monitor student small-group discussion is a foundational message: that students should first and foremost be striving to use the language of the teacher's discipline, the teacher's own community of knowledgeable peers. This is a foundational message because it reinforces dependence on the teacher's authority and unquestioning reliance on the authority of what the teacher knows. Students fear that they will "get it wrong." Teachers fear that discussion will "get out of hand"—that is, go in some direction that the teacher has not anticipated and thereby cast doubt on the teacher's classroom authority and the authority of the teacher's knowledge.

While students are at work, the teacher's main responsibility is keeping time. Time is a nonrenewable natural resource. The teacher's job is to conserve it. The length of time that students spend on a task depends on the complexity of the task and on how accustomed students are to working together. Depending on how much time is available, the teacher sets a time limit for the work or simply asks each group at some point how much more time they think they will need. When most groups have completed the task, the teacher asks the recorder in each group to report and, acting as recorder for the class as a whole, writes out the results on the blackboard or asks the recorders to write their results on the board themselves. If most groups have been able to complete only part of the task, the task the teacher has assigned was too long or complex for the time available. Recorders report on the part the group has been able to complete and leave the rest for another time.

When the small-group work is finished, the teacher referees a plenary discussion in which the class as a whole analyzes, compares, and synthesizes the groups' decisions, negotiating toward an acceptable consensus. Here, the teacher serves as recorder for the class as a whole, not only writing out and revising the consensus as the discussion proceeds, but also pointing out gaps, inconsistencies, and incoherence. Finally (as we shall see later in this chapter), the teacher compares the class's consensus with the current consensus in the knowledge community that the teacher represents.

Throughout this process—group work toward local consensus plus reports, followed by plenary discussion toward plenary consensus—alert teachers will expect some awkwardness at first. During the small-group work, teachers and students alike may have to adjust to the noise produced by several excited conversations going on at once in the same room. Classroom noise is partly a matter of room size and sound-absorbing materials. Sensitivity to classroom noise is largely a matter of expectation. Teachers who normally think that students should sit quietly and take notes or speak only after they have raised their hands find that the din of conversation in a smoothly running collaborative classroom takes a lot of getting used to. Most college and university teachers and students have not experienced classes where active, articulate students are the norm. They decidedly are the norm within the protective security of collaborative consensus groups. With experience, some teachers even become so acutely sensitive to the register of sounds generated by consensus group conversation that they can tell by the tone of the din whether or not things are going well.

Teachers and students alike may also be disturbed at first by what they feel as the chaos of collaborative classes. This feeling of chaos is also a matter of expectation. As Chapter 4 explains, classroom social interaction of the sort that goes on in collaborative learning is rare in the classrooms that most college and university teachers are used to. Traditional teaching places teachers at the center of the action and makes teachers the center of attention. Conversation goes on between the teacher and each individual student in the room. Traditional lecturers seem to be speaking to a socially coherent group of people. Actually they are speaking one to one, to an aggregate set of isolated individuals among whom there are no necessary social relations at all. Even when discussion among students in the class does occur, it tends to be a performance for the teacher's benefit, just as the teacher is performing for the students' benefit.

In place of this traditional pattern of one-to-one social relations, collaborative learning substitutes a pattern in which the primary focus of students' action and attention is each other. Teachers teach for the most part indirectly, through reorganizing students socially and designing appropriate tasks. Students converse among themselves with the teacher standing by on the sidelines, for the time being mostly ignored. Once consensus-group collaborative learning finally "takes" in a class, even when teachers lecture and conduct drills and recitations (as they almost inevitably must do once in a while), the negotiated understanding among the students changes the lecturer's position relative to the class. Teachers no longer lecture to a set of aggregated individuals. The fact that the students have become a transition community of people who know one another well means that whatever the teacher says takes its place in the context of an ongoing conversation among the students to which the teacher is not entirely privy. Empowered by their conversation, students are less likely to be wowed into passivity by whizbang lectures. They are more likely to question actively and synthesize what the teacher has to say.

So, both in organizing consensus groups and in lecturing to classes in which students have worked together collaboratively, teachers used to traditional classroom organization may at first feel that a collaborative learning class is desperately out of control—that is, out of the teacher's control. It may well be out of control if the collaboration is successful, but from the point of view of nonfoundational teaching it is comfortably and productively so. And the teacher's initial feeling of lost control tends to dissipate as students and teachers alike understand and accept the unaccustomed social structure of collaborative learning.

Much of the research on the negotiations that go on in collaborative learning consensus groups was done in the 1950s and 1960s, although in recent years there has been some resurgence in this research. Because to date most research has studied "decision-making groups" in businesses, government, and the military, some of it is only marginally related to college and university teaching. The relevant work is nevertheless important to collaborative learning, and awareness of it can be useful to teachers organizing consensus groups. It has mainly to do with group composition (effective group size relative to the type of task and the effects of heterogeneity and homogeneity), the quality of decisions made (number of options considered or variables accounted for), the phases of work through which groups pass in negotiating decisions (openings, transitions, endings; resistance to authority, internalization of authority), barriers to effective group decision making (authority-dependency problems, effects of reticent and dominating personalities), the nature of consensus, and the effects and fate of dissent.[1]

Studies suggest that the optimum size for decision-making groups (such as classroom consensus groups) is five. More than five will not change the social dynamics much but will dilute the experience, negligibly in groups of six but significantly in groups of seven and eight, and almost totally in groups of nine, ten, and more. Fewer than five in a group will change the dynamics in fairly obvious ways. Groups of four tend to subdivide into two pairs; groups of three tend to subdivide into a pair and an "other"; and groups of two (called "dyads") tend to sustain levels of stress sharply higher than those of any other group size. In contrast to consensus or decision-making groups, however, working groups (students doing research projects together for several days, weeks, or months, for example) seem to be most successful with three members. Long-term working groups larger than three often become logistically cumbersome.

Degree of heterogeneity or homogeneity is another issue in group composition. In general, heterogeneous decision-making groups work best because, as we saw in Chapter 1, differences tend to encourage the mutual challenging and cancellation of unshared biases and presuppositions that Abercrombie observed. Groups that are socially or ethnically too homogeneous (everyone from the same home town, neighborhood, family, or fraternity; close friends, teammates, clique members) tend to agree too soon, since they have an investment in maintaining the belief that their differences on basic issues are minimal. There is not enough articulated dissent or resistance to consensus to invigorate the conversation. Worse, homogeneous groups tend to find the differences that do arise difficult to endure and are quick to paper them over. On the other hand, members of decision-making groups that are too heterogeneous may have no basis for arriving at a consensus—or no means for doing so: they find that they cannot "come to terms" because they "don't speak the same language."

This inability to come to terms can be literally the case in some highly diverse student populations in which many people are struggling with English as a second language. Too much heterogeneity can also occur when the different languages in question are community dialects of standard English (ethnic, regional, or neighborhood) that students bring with them to class. But difficulty in coming to terms does not of course afflict only students. Lawyers, physicians, accountants, and members of the academic disciplines have "community dialects," too. For example, ask a group composed of otherwise cooperative, well-disposed faculty members from a half-dozen different disciplines (say, biology, art, mathematics, English literature, cultural anthropology, and history) to arrive at a consensus on the definition and proper use of the word "natural," and the only resulting agreement is likely to be an agreement to disagree.

Some of the most troublesome differences that teachers organizing consensus groups may encounter are ethnic differences, often masked by stereotyping (including self-stereotyping) or by superficial conformity. Difficulties arise because collaborative learning requires students to do things that their ethnic background may not have taught them to do or that it actively disposes them not to do.

Some ethnic groups (indeed, some families) accustom people to negotiating decisions that affect all members of the group. Students with this kind of background tend to be comfortable with collaborative learning and know how to go about it. In other ethnic groups (and families), decisions are made autocratically by one person or by a small in-group. Negotiation is unknown. Dissent is forbidden and punished. Students with this kind of background tend to feel uncomfortable in collaborative learning, don't know how to do it, and resist it.

In still other cases—typically among adolescents—the pressure to maintain the coherence of cliques or gangs can curtail participation in other relationships, such as working collaboratively in classroom consensus groups. Classroom collaboration on tasks that excite interest can threaten clique values and, by cutting across clique loyalties, weaken them.

On the average, most students take well to collaborative learning, but many still have something to learn about it. Many students working together in small groups go through a fairly predictable process of adaptation in which they relate to each other differently at different times during their collaboration. Studies of people working together tend to identify two such "phases of work," dependence and interdependence, and two "major events" that challenge people's preconceptions, one at the beginning of each phase.[2]

Each phase of work displays a characteristic source of disruptive stress. In the first phase, the source of stress is stereotyped attitudes toward authority that people bring with them into a group. *Authority* here refers to feelings about the way power is distributed in the group: who makes the decisions and how those decisions are enforced. The major event that precipitates an authority crisis in consensus groups is withdrawal of the acknowledged external authority. It may happen in collaborative learning, for example, if the teacher leaves the room.

The second source of stress comes into play in the second phase, as the group develops interdependence. It is the stereotyped attitudes toward intimacy that people bring with them into a group. *Intimacy* here means how people normally get along with their peers. The event that precipitates an intimacy crisis is being asked as peers to exercise authority with regard to one another. In collaborative learning, typically, it happens when the teacher asks students to evaluate one another's work.

Teachers organizing consensus groups have to keep all these variables in mind—degree of heterogeneity, group size, ethnic background, phases of work, and so on. When collaborative learning "just doesn't work," any number of forces may be in play. The first few times students work together at the beginning of a term the principal agenda may have to be, for some students, learning how to negotiate effectively. For others, it may be feeling comfortable negotiating at all. Sometimes, when teachers find that some students need to learn how to work together productively, they may have to teach them what they need to know through role playing or modeling. Very occasionally, teachers may have to suggest some basic rules for respecting others in conversation. Some students may have to be told explicitly not to interrupt when others are talking, to maintain dissent firmly but not obstreperously if they continue to believe in it, and to expect that negotiation and consensus building may involve compromise—giving up something you want in order to get something else you need or want more.

Students may also resist consensus group work or other kinds of collaborative learning simply because social engagement can be hard work. It calls upon a range of abilities that many college and university students may not yet have developed fully or refined: tact, responsive listening, willingness to compromise, and skill in negotiation. But it is usually a lot better for teachers to assume until they find out otherwise that their students have learned at least some rudimentary skills of the craft of interdependence and are socially mature enough to work together productively. Most college and university students, whatever their age and background, have had a lot more informal experience working collaboratively than most teachers give them credit for. Only when ethnic background, personal incompatibility, or social immaturity gets in the way of working on the task will it help for teachers to call attention to the process as opposed to the task. Even then, usually, the best way to do it is to turn the way the group is working together—the way people are helping or not helping get the task done—into a task like any other task for the group to work on collaboratively.

Partly because of the many variables involved in successful collaboration, many teachers find that, over time, changing the makeup of consensus groups from class hour to class hour tends to ease classroom tensions. Change in group makeup helps students enlarge their acquaintance, escape aversions and entrenched enmities, dissolve entrapment in cliques, and acquire new interests and abilities by working with a variety of student peers. In any case, the teacher's goal is to create a collaborative class as a whole, not an aggregate of loosely federated miniclasses coherent in themselves but unrelated to all the others.

On this issue of regularly changing the composition of consensus groups, as in the other practical matters, there is room for disagreement among teachers who have had experience with collaborative learning. Peter Hawkes argues, for example, that social coherence among students working in small groups may be time-consuming to achieve, and achieving it may be demanding and complex for the students involved. In that case, keeping students in the same small groups all term may be more efficient than mixing them up from class to class. A teacher's decision on this score may be in part a function of institutional conditions such as size, composition of the student body, whether students are in residence or commute, and so on.

Besides composing students into consensus groups, teachers who organize collaborative learning also set the tasks that students work on together. Designing effective exercises, problems, or tasks for people to undertake collaboratively requires forethought and practice. Tasks may be questions to be answered by arriving at a consensus, or they may be problems to be solved to the satisfaction of all members of the group. A closed-ended question with a yes-or-no answer is in most cases of little value, although an open-ended task that requires groups to agree on a rationale for a yes-or-no answer can be very valuable indeed. That is, collaborative learning tasks do not ask, Yes or no? But they may ask, Why yes or why no?

In general, collaborative learning tasks differ significantly from textbook, problem-set tasks, which are usually foundational in nature. Foundational tasks are what Richard Rorty calls "jigsaw puzzles." They have a predetermined right answer that students must arrive at by a predetermined acceptable method. Their solution requires, as Rorty puts it, a tidy "inferential process . . . starting with premises formulated in the old vocabularies," the accepted disciplinary languages and method, leading to the discovery of "a reality behind the appearances, . . . an undistorted view of the whole picture with which to replace myopic views of its parts."[3]

In contrast, collaborative learning tasks are nonfoundational, constructive, tool-making tasks. They do not presuppose either one right answer or one acceptable method for arriving at it. As Chapter 4 suggests, these tasks draw students into an untidy, conversational, constructive process in which, because they do not yet know "the old vocabularies," they create new ones by adapting the languages they already know. The result is not an undistorted view of a reality presumed to lie behind appearances. The result is a social construct that students have arrived at by their own devices and according to their own lights.

Foundational and nonfoundational tasks are, of course, alike in some ways. Usually both are unambiguous about initial procedures and starting points. But unlike foundational tasks, nonfoundational tasks are ambiguous about methods and goals. That is, they tell students how to begin, but they are designed so that neither teacher nor students can predict with much accuracy where the discussion will go from there.

A nonfoundational, tool-making task may look at first like a foundational task, a jigsaw puzzle. It may look as if it requires students to fit together old vocabularies in order to discover "the right answer." But even if it has this traditional appearance, a nonfoundational task is designed so that, as students work through it, it turns into an eccentric, ill-fitting puzzle. They may find out that there are not enough pieces included in the task to complete the puzzle, so that they have to hunt up or invent some. Or they may find that some of the pieces are the wrong shape for the holes they seem intended for. In some cases, there may be too many pieces, so that students have to select among them. Or the pieces of the puzzle may turn out to be inappropriate, so that students have to translate them, changing their shape in order to make them fit.

In practical terms, therefore, there are two basic types of nonfoundational tasks that can be used in consensus-group collaborative learning. The purpose of both is to generate focused discussion directed toward consensus. They are both "open-ended," but in different ways.

One kind of collaborative learning task, which we might call Type A, asks a question to which there is no clear and ready answer. The purpose of this kind of task is to generate talk about the kinds of consensus that students might reach in response to the question asked. The instructions tell groups to arrive at a consensus that completes the task in a way that satisfies most members of the group and to discuss the possible reasons

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for differences of opinion among members of the group or dissent from the group's consensus.

An example of a Type A task, one that I have sometimes used in demonstrating collaborative learning, is to ask people working in consensus groups to consider a key sentence of the Declaration of Independence:

> We hold these Truths to be self-evident, that all men are created equal, that they are endowed by their Creator with certain unalienable Rights, that among these are Life, Liberty, and the pursuit of Happiness.

The instructions for this task ask people to reach a consensus on the definition of several words in the sentence (such as *truths, self-evident, created equal, unalienable rights, life, liberty,* and *happiness*) and to write, collaboratively, a sentence that paraphrases the passage in their own words. What makes this task a nonfoundational, constructive, toolmaking exercise and not a foundational jigsaw-puzzle task is that several crucial terms in the sentence are, to say the least, somewhat vague, while other terms, most notoriously the reference to "men," contradict popularly held current views.

The other kind of collaborative learning task, which we might call Type B, asks a question and does provide an answer to it—an answer that is accepted by the prevailing consensus in the disciplinary community that the teacher represents. The instructions tell groups to arrive at a consensus about how (or why) the larger community may have reached that answer.

The purpose of this kind of task is to generate talk about what the small group would have to do to reach the consensus reached by the larger community. The task might pose a textbook problem in mathematics or the natural sciences, give the accepted answer to that problem, and ask the group to explain two or more ways to reach that answer. Or it might quote an authoritative scholar's interpretation of a poem or historical event and ask the group to explain how they suppose the critic arrived at that interpretation.

Peter Hawkes has described one example of a Type B task. In teaching *Huckleberry Finn,* he points out that the way the novel ends—by humiliating the runaway slave, Jim—seems inconsistent with earlier passages in which Huck and Jim become reconciled as human beings. He asks students working in groups to arrive at a consensus in response to the major questions that critics discuss: how do they explain "Huck's 'forgetting' what he learned about Jim on the raft," whether they think the ending "undercuts all the meaning developed in the main body of the novel," and how they think the novel should end (what the "right ending" would be).[4]

So far, the task differs little from a Type A task. What turns it into a Type B task is that Hawkes then asks students to compare the positions they have taken with "positions staked out by various critics." He introduces them to the critical opinions of major writers on the novel, such as Ernest Hemingway, Lionel Trilling, and T. S. Eliot. The students may then discover that some of the positions they have taken correspond to positions that the critics have taken. When they do not correspond, the students' task is to try to determine how a critic might have arrived at such a position. In the process, the students have joined a conversation that has gone on among members of the community that the teacher represents, rather than being merely outsiders looking in. They are not talking about literary criticism. They are being literary critics.

Mathematics, the sciences, and technical subjects also offer opportunities for both Type A and Type B collaborative learning tasks. In an introductory college or university physics course, a Type A task might ask students to address the question, How do we think about things we can't touch and don't have an instrument to measure, such as quarks and supernova? Arnold B. Arons exemplifies a Type B task, in which the teacher provides minimum guidance by asking questions and eliciting suggestions. In introducing the laws of inertia, for example, Arons places a 50-pound block of dry ice on a level glass plate and asks students, working in groups, to answer questions such as, How does the block behave once it is moving? What action on our part is necessary to make the object move faster and faster, that is, accelerate continuously? Suppose the block is moving: what actions change the *direction* of its motion? and so on. Questions such as these are designed to help students "notice systematic changes," "impose systematic alterations on a configuration and predict or interpret the resulting effects," and "invent interesting and fruitful configurations of their own." Like Abercrombie's medical students, it is up to these physics students, working in small groups, to "suggest, try, argue, and interpret in their own words, carefully avoiding any, so far undefined, technical vocabulary."[5]

Both kinds of open-ended, collaborative learning tasks have a consistent, long-run educational purpose and a clear, short-run criterion for success. The purpose in both cases is to help students organized collaboratively to work without further help from the teacher toward membership in the discourse community that the teacher represents. The criterion for success is that students have created the tools they need to solve the somewhat eccentric puzzle that the task presented them with.

Besides being appropriately nonfoundational and constructive in design, the degree of difficulty of consensus-group collaborative learning tasks should be appropriate to the students in the class and to the point in the course that the class has reached. When a task is too easy, students get bored. There is not enough to talk about, the conversation is trivial and unchallenging, and the groups solve the problem too quickly. If a task is too hard, it stymies students from the start and throws them back into dependency on the teacher's authority. Then both students and the teacher have no choice but to rely once again on direct instruction. This reversion to type puts the whole process at risk. Effective consensus group tasks engage the collective labor and judgment of the group and keep students' interest focused long enough and sharply enough for the job to get done. They therefore fall within a band of complexity and difficulty defined by each class's collective "zone of proximal development."

"Zone of proximal development" is a term invented by the Russian psychologist L. S. Vygotsky to refer to understanding that lies just beyond current knowledge and ability: what we cannot learn on our own at the moment, but can learn with a little help from our friends. For any of us individually, the "zone" of what we are capable of learning next, between what we already know and what we can't make sense of for love nor money, can often be somewhat narrow: what I am ready to understand working alone may be fairly limited. But in a heterogeneous group that includes diverse experience, talent, and ability, people's "zones of proximal development" overlap. The distance between what the group as a whole already knows and what its members as a whole can't make sense of for love nor money—the area of what as a whole they can learn next—is likely to be fairly broad. As a result, I may be ready to understand a good deal more as a member of a working group than I would be ready to understand by myself alone.[6]

One thing that students learn in consensus group collaboration, therefore, is that they can accomplish the task at hand by analogizing, generalizing, or extending what they know—the knowledge and abilities they have acquired in other social, conceptual, or practical contexts—so as to complement other people's strengths and limitations in unexpected ways. Teachers design collaborative learning tasks to help students transform the knowledge that everyone brings to class and apply it to the new problems and conditions imposed by the task.

For example, suppose the task were to examine the political or sociological problems involved in installing a new sewer system without killing business on Main Street. In that case, what one student knew about how to address a complex audience (learned, say, working in a factory job trying to talk simultaneously to the boss, the shop steward, and fellow workers) might enlighten another student who could provide expertise in efficient work planning and division of labor (learned in dividing household tasks equitably among several children in order to gain time for work or study or in assigning responsibilities to a television production team).

Or if the task were to understand a love poem by John Donne, a student who was a dictionary or encyclopedia freak might rustle up definitions and background; another who has learned to read aloud effectively in a speech class or on the campus radio station might provide insights through emphasis and tone of voice; still another might call upon an unusual wealth of personal experience in affairs of the heart. What one person knew about how to put together a carburetor, a banjo, or a sales campaign might complement what another knew about the personal tensions among people on a basketball team, in a church vestry, or on a construction crew. In examining the effects of inertia on a block of dry ice, students may be able to bring to bear what they have learned rowing a boat, biking, driving, or moving their luggage into the dorm.

The teacher's job is to design tasks that help people discover and take advantage of group heterogeneity and thus, by expanding the group's collective "zone of proximal development," to increase the potential learning power of every individual in the group. In order to help students discover these collective resources, tasks often include an element of "polling" sometime early in the process. After one student in each group reads the whole task aloud (to get the issue as a whole "on the table" and break the ice), the task requires each person in the group to give his or her off-the-cuff definition of key words in the passage being discussed. Later tasks may include an element of writing and collaborative editing. Typically, toward the end of a group-work period the group asks its recorder to read aloud a draft of the report. Listening to its recorder rehearse the report to be given to the class as a whole, the group then suggests ways to make it more complete and represent more accurately the group's discussion and consensus.

The way that task design can foster constructive conversation may be illustrated by my own experience a number of years ago in a freshman course intended to introduce undergraduates to reading fiction. The goal was to acquaint students with a few well-known stories in a standard anthology, help them interpret those stories in a relatively sophisticated way, and introduce them to some basic critical issues. In planning the course and in devising collaborative tasks for it, I returned to the tried-and-true source of critical principles, Aristotle's *Poetics*. I followed the Aristotelian emphasis on "action" or "plot" as first in importance among the elements of fiction, followed closely by "character."

I divided the analytical tasks for collaborative work into a set of questions that focused the students' attention on these aspects of several short stories I had assigned. The students dealt collaboratively with one task each class hour. The first task asked them to identify the central action in one of the stories (What "happens" in the story?) and its central character (Who does it? or, To whom is it done?). The second task asked students to identify the story's central action and central character as generic "types" (action: falling in love, the end of a career; character: ingenue, old man). The third task was to explain how the story distinguishes the central action and central character from that "type." That is, it asked what expectations the story raised and how the story met, fulfilled, frustrated, or changed those expectations.

What I learned from posing these deceptively simple, apparently unsophisticated generic questions to the consensus groups I organized in that class is that even relatively naive, untutored students can be trusted to generate many important disciplinary (in this case, literary-critical) problems and even some classic solutions. Of course, the better prepared students are, the more complex and sophisticated the resulting consensus may be.

But even when students start such a set of tasks from scratch, their first and persisting problem, as Abercrombie discovered, is to unearth the presuppositions and biases that each of them brings to the task and to resolve conflicts between them resulting from those presuppositions and biases. Being required to arrive at a position that the whole group can "live with" can hurl students headlong into the knottiest and most sophisticated issues of almost any discipline. It can therefore lead to a firmer and more sophisticated grasp of subject matter. That's what happened in the course I have just described. Eventually, the students began to understand this particular set of short stories in considerable depth. They also began to read fiction in general with greater understanding and talk and write more effectively about it.

There is no foolproof method for devising consensus tasks. I have written plenty of tasks that I believed would work perfectly and wound up revising every one of them again and again. I have nevertheless found that the following set of principles, devised by Peter Hawkes, covers the basic issues in collaborative learning task design.[7]

1. **Head every worksheet with the same general instructions.** This eliminates the time groups may spend interpreting new directions. One heading that works well is this:

Instructions.

Once the groups have been formed, please introduce yourselves to each other. Then agree on one person to record the views expressed in the group, including both the decisions the group makes collaboratively and significant dissent. The recorder will speak for the group. For each question, decide on one answer that represents a consensus among the members of the group.

2. If the task asks students to discuss a written passage (a primary, secondary, or student-written text), in the first instruction following the general instructions **ask one member in each group to read the whole task aloud.** To encourage participation, the person reading the task aloud should not be the recorder.

3. Because arriving at a consensus can be time consuming, **make the material to be analyzed short.** A single short paragraph or even just a sentence or two is plenty—often more than enough—for a thirty- or forty-minute discussion.

4. For the same reason, **limit the number of questions that the task asks students to address.** In most cases one question is enough. More than two or three can be overwhelming.

5. **Make the questions short and simple.** Conversation leads students in most cases into as much profundity and complexity as they can handle and in some cases more than the teacher bargained for.

6. **Make the questions concrete and clearly expressed.** Otherwise, students are stymied and throw the questions back. That is, the task becomes figuring out the terms of the question and the teacher's intent, not dealing with the substantive issue.

7. **Sequence the questions within each task, and sequence tasks from class to class and week to week.** The general direction should be from low-involvement, nonthreatening questions and tasks to high-demand questions and tasks.

For example, a task might begin by asking students to explain to one another their first impressions of a topic, problem, or text, or to survey how each student in the group would define key terms (that is, do some "polling"). Then it might ask an analytical question. Finally, the task might ask a broad question that requires students to synthesize the material and their answers in order to climb a few rungs on the abstraction ladder. A whole semester of tasks could be developed on this general sequence.

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8. **Ask questions that have more than one answer.** Different responses ensure that recorders' reports do not become repetitive and will provide issues for debate. In a composition course, for example, "What's wrong with sentence five?" is less effective than "How would you improve the weakest sentence in this essay?" If the task is to analyze material drawn from a subject matter textbook, the questions should go beyond "What does it say?" to "What does it assume?"

9. In some tasks **ask controversial questions.** Some of these can be based on issues raised by prominent authorities in the field but not yet satisfactorily resolved. After the groups have made their decisions and the class has discussed them, the teacher can read aloud some of the published controversy for comparison and further discussion.

10. In some tasks **ask students to analyze short passages concretely.** These passages can be typed out or reproduced from the printed page, or the task can refer to a page in a book that everyone brings to class. Make the questions directing students' analysis pointed: ask about specific words and phrases, what they mean, their relation to other specific words and phrases, their significance in the whole passage, and so on.

11. **Whenever the task asks students to generalize, ask them to support their generalizations with particulars.** For example, if the task is to evaluate a student essay, also ask the groups to specify, say, three examples from the essay that support their opinion. If the task is to discuss a substantive issue, don't just ask "What are the implications of the passage?" Ask "Where exactly—with which words—does the passage imply what you think it implies?"

Teachers have to be prepared for the fact that faulty tasks often provide an occasion for students to draw the teacher into the small-group discussion. Even under the best conditions and with the best-designed tasks, traditional dependence on a teacher's authority exerts a powerful undertow on students and teachers alike. It sometimes leads to "performance" questions—requests for information or clarification made in the belief that the student role demands it. These apparently innocent requests take the form of "What does X mean?" or "How are we supposed to do Y?" Teachers handle questions like these best by turning them back to the students to decide in group discussion what they think X means or how they think they should do Y, and then go on with the task.

For example, sometimes a task turns out to be ambiguous in a way that the teacher hadn't noticed or fails to supply a basic item of information. When that happens, in addition to apologizing, teachers can redirect students' appeal for help or information in several ways. One way is to ask if any group has found the necessary information, in the textbook or elsewhere, or has discovered a way to clarify the ambiguity or work around it. Another is to provide the whole class with the necessary information or clarification. A third is to ask the groups to stop discussing the question asked in the task and begin discussing instead how they would go about getting the information they need in order to answer the question, or how they would debug the task.

The payoff for teachers who turn questions back to consensus groups in this way is that the teacher is likely to get an unusually precise (and sometimes dismaying) estimate of just how much students really understand so far about the course material, in contrast to an estimate of the native student ability to parrot answers. This new awareness has been known to undermine college or university teachers' previously unquestioned belief in the imperative of "coverage," because it tends to explore the tacit but widely held notion that (as Elaine Mamion has aphoristically put it) "I know I've taught it, because I've heard myself say it." Asking students to question the task can sometimes also sow healthy, unanticipated doubts in the minds of the most self-confident college and university teachers about their own grasp of the subject matter and the universality of some of their discipline's least questioned, most authoritative truths.

The third responsibility taken on by teachers who organize consensus groups, or any other kind of collaborative learning, for that matter, is to evaluate the quality of students' work, both individual and collaborative. Teachers fulfill this responsibility in two ways, or rather, during two phases of the process: as referees while the work is going on and as judges after the work is over.

Every social relation that involves differences of opinion requires a referee. Someone has to represent, not the interests of one party or another, but the values and mores of the larger community that has a stake in the peaceable, profitable outcome of negotiations that go on in the subcommunities it encompasses. Even in sandlot baseball games, kids know the importance of nominating someone in the group to call strikes, balls, and outs. In jury trials, defense and prosecution lawyers represent the defendant and the state, respectively. The jury represents the local community of the defendant's peers. The judge referees, representing the legal system as a whole: the larger community that includes all of us who agree to live by the rule of law.

Consensus-group collaborative learning also needs a referee. Whenever small groups of students negotiate toward consensus, there are, within groups and among them, both resolvable differences of opinion and unresolvable dissent. When students disagree on the main point of a paragraph because they understand a key word differently, for example, they may be able to resolve their difference by resorting to a dictionary. But if two factions in the discussion disagree because they are making different assumptions, based, say, on ethnic, gender, or class differences, the disagreement may not be so easy to resolve. One faction may dissent from the consensus being forged by the other members of the group and refuse to be budged. In this case, the group agrees to disagree. That is its consensus. That agreement (and an account of what led to it) is what its recorder reports in the plenary session.

Throughout this stage of the process, teachers typically remain uninvolved in any direct way. Once the small-group work is over, however, teachers become more actively and directly involved, not by taking sides but as referees who organize and moderate a plenary discussion based on the reports delivered to the class as a whole by the groups' reporters. Whether or not they understand every aspect of their agreements and differences, most student consensus groups will be prepared, and usually eager, to maintain their position against different positions arrived at by other groups. The teacher's role in plenary discussion is to help the class synthesize reports of the groups' work and draft a synthesis that draws together major points in those reports, if possible helping to construct a consensus that represents the views of the whole class.

Here dissent becomes especially important. In collaborative learning, teachers should make it clear that dissent is welcome and actively encourage recorders to mention in their reports dissenting views that were expressed during the group's discussion. By a "dissenting view" I do not mean only a hard-line, entrenched position. I mean any opinion or view expressed by anyone in any group, anytime during the discussion, perhaps only in passing, perhaps incompletely formulated, that could not be completely assimilated into the group consensus.

Dissent is important in collaborative learning for at least two reasons. First, it may frequently happen that dissent in one group turns out to be the essence of another group's consensus. A split opinion within or between groups may be just what is needed to disrupt complacent or trivial decisions arrived at by the rest of the class. It can also happen, even more strikingly, that one lonely voice of dissent in a class can eventually, in the course of plenary discussion, turn the whole class around, leading it out of a quandary and toward a more satisfactory consensus of the whole or toward a more correct or acceptable view—that is, toward the view that is currently regarded as correct or acceptable by the teacher's disciplinary community.

Another reason for ferreting out dissent is that part of the point of collaborative learning is to teach the craft of interdependence to students who face a world in which diversity is increasingly evident, tenacious, and threatening. Plenary discussions may therefore explore the sources of dissent in ethnic, gender, class, and other "background" differences. Part of the lesson in that case, as John Trimbur has argued, is that understanding why people dissent can be as important to reaching accord as understanding the dissenting opinion itself.

In order to achieve a larger consensus of the class as a whole when the issue is divided, teachers direct student energies in the plenary discussion toward debating two (or more) sides of the issue. The debate ends when the differing parties arrive at a position that satisfies the whole class, or when they agree to disagree and understand the reasons for their disagreement. Occasionally, of course, a lone dissenter or small faction of dissenters will hold out against the class as a whole, taking a position that would not be regarded as correct or acceptable by the teacher's discipline. In that case, wise teachers trust the negotiating process over time either to bring the dissenters within the boundaries of what is currently regarded as acceptable, or (rarely, but also possible) to move the teacher's own and the discipline's current view of what is acceptable in the direction of the dissenters' position.

The teacher's role changes once again once the class reaches a plenary consensus—some sort of agreement that most members of the class as a whole can "live with," including perhaps, for some members, an agreement to disagree. At this stage in the process teachers act for the first time directly and overtly as representatives of the larger community they are members of and that their students hope to join. That community may be a disciplinary one, a community of mathematicians, historians, chemists, sociologists, or whatever, depending on the course and teacher's field of expertise. Or it may be the larger community of those who write, and who expect to read, standard written English organized in certain conventional ways. In speaking for the community at large at this stage of collaborative work, teachers are in the educationally fortunate position of not having to label the consensus formed by the class as merely right or wrong. Rather, the teacher's role is to tell the class whether or not its consensus corresponds to or differs from the prevailing consensus of the larger community.

If the class consensus is more or less the same as the consensus of the larger community, in most cases that's that. Next task. But if the consensus reached by the class differs from the consensus of the larger community in a significant way, then the issue becomes "Why?" To answer that question, teachers usually send the class back to small-group discussion. The task is to examine the process of consensus making itself. How did the class arrive at its consensus? How do the students suppose that the larger community arrived at a consensus so different from their own? In what ways do those two processes differ?

Here the teacher's job, although quite a bit different from the job of a baseball umpire, still looks a lot like the job of a judge in a court of law. Umpires do not explain their decisions to players. But judges often explain their decisions in terms of precedents: the existence of similar decisions in other cases, arrived at by other members of the judge's community of knowledgeable peers. That is, they show that their views are consistent with the views of the community they represent. When they do that, judges are acting a lot like college and university teachers who organize collaborative learning.

Teachers do not tell students what the "right" answer is in consensus-group collaborative learning, because the assumption is that no answer may be absolutely right. Every "right" answer represents a consensus for the time being of a certain community of knowledgeable peers: mathematicians, historians, chemists, sociologists, or whatever—or perhaps only some mathematicians, historians, chemists, sociologists, or whatever. The nature of the answer depends on the nature of the reasoning conversation that goes on in differently constituted communities. And the authority of the answer depends upon the size of the community that has constructed it and the community's credibility among other, related knowledge communities. Once the teacher has shown the class the relation between its own process of negotiation and the negotiations that go on in larger, professional communities, it is poised to take an important step beyond reliance upon external authority toward learning more about the process by which ideas, values, and standards are constructed, established, and maintained by communities of knowledgeable peers.

Comparing the class consensus with that of the larger community is one way to evaluate students' work. The other way is by judging the work that students do individually, based on their collaborative work. That is, teachers evaluate the degree to which students have internalized the language of the conversation that has gone on both in small-group discussion and in the plenary discussions. In this capacity, college and university teachers do not usually judge the quality of students' social behavior in class or how effectively they work with each other in collaborative groups, although (rarely) they may find it appropriate to do that. They evaluate the quality of students' contributions to the class's conversation in its displaced form, writing.

Writing enters the collaborative process at several points. In the first place, conversation in consensus groups prepares students to write better on the topic at hand by giving them an opportunity to rehearse and internalize appropriate language. Recorders write reports, and the groups they represent help edit them. Teachers can ask students to write their own essays or reports on the basis of consensus group conversation, or to revise what they have already written based on it. And (as Chapter 3 explains in detail) teachers can ask consensus groups to undertake tasks that increase students' ability to talk effectively with one another about writing itself and to help one another revise. As a result, after students have begun to acquire language appropriate to peer evaluation—that is, as they begin to learn how to talk effectively with one another about writing—teachers can ask students to begin writing peer reviews of one another's writing and then evaluate the helpfulness, incisiveness, and tact of their remarks.

But in the end, it is the writing that students produce individually as a result of this process that counts in evaluating them. It is with their writing, after all, that students apply for official membership in the communities—of chemists, lawyers, sociologists, classicists, whatever—that are larger, more inclusive and authoritative than any plenary classroom group, reaching well beyond the confines of any one college or university campus.

One reason for judging the quality of students' written contributions to the working conversation among peers is that, as agents of the institution, teachers must satisfy the college or university's grading requirements in order to maintain institutional records. A more important reason is that judging the quality of students' output helps students understand the responsibility they accept when they join a community of knowledgeable peers. The process fosters in students the responsibility to contribute to that community, to respect the community's values and standards, to help meet the needs of other members of the community, and to produce on time the work they have contracted to produce. When students join the community of those who write standard English organized in conventional ways, for example, they accept responsibility on terms agreed to by that community for the writing and reading that they do. They write so that others in the community can understand what they have written. And they read one another's work carefully enough so that if they were to report on what they have read, the writer would agree that that indeed was what was intended.

In this chapter we have followed a class of college or university students discussing an appropriately limited issue through a series of nested consensus groups: small groups, the class as a whole, and the disciplinary community that the teacher represents. Each group in the series constructs knowledge in conversation with knowledgeable peers. That is, the knowledge that group members wind up with was not "given" to them directly by the teacher. They constructed it in the course of doing the task that the teacher supplied. So at first their new knowledge, the knowledge they have constructed, does not have the same degree of authority—or "clout"—as the knowledge that teachers "give" students in a traditional class. There, the authority of knowledge is understood to vary according to the preparation of the teacher. In a class organized for collaborative learning, authority of knowledge varies according to the size and complexity of the groups of students that, with the teacher's guidance, construct it. In the sequence we have followed, the knowledge constructed by small consensus groups has less authority than the knowledge that, based on the reports of those groups, the class as a whole constructs. The knowledge that the class as a whole constructs has this greater authority not only because the class is larger than the small groups, but also because it contains the small groups nested within it.

The knowledge constructed by each small consensus group has only the authority of a group of five students. Nevertheless, the authority of these small groups is greater than the authority of any individual student in the group before the group reached consensus. Small groups increase the authority of their knowledge when they compare their results with the consensus that other groups have arrived at and negotiate a consensus of the class as a whole (of, say, twenty-five students). In that way they increase the authority of the knowledge they have constructed from that of one student to that of twenty-five.

The final step in constructing knowledge and increasing its authority occurs when the class as a whole compares its consensus on the limited issue addressed in the task with the consensus on that issue of the immeasurably larger and more complex disciplinary or linguistic community (such as chemists, historians, or writers of standard English) that the teacher represents. If the two match, the authority of the knowledge that the students have constructed increases once again. The small knowledge community of the class as a whole, with its still smaller discussion groups nested in it, has itself become nested, on one issue, within that much larger community. The students in the class have joined, with respect to that issue, the community that they aspired to join by taking the course.

An example of the process would be the way a class might analyze the key sentence in the Declaration of Independence. Four or five small groups might arrive at quite different definitions of, say, the term "unalienable Rights." These definitions would be the knowledge (or "understanding") that each group constructed and would have the authority implicit in a consensus arrived at among five people. The teacher would ask the class as a whole, after hearing reports from each group, to work toward a single consensus, acknowledging differences. That consensus would then be the understanding of the term that the class as a whole has constructed. It might be similar to some of the definitions constructed by the small groups, or, as a result of further discussion, it might be quite different. It would have greater authority than the definition arrived at by any one student or any one small group: it would have the authority implicit in an agreement among twenty-five people as opposed to just one or five.

Finally, the teacher might ask the class, perhaps working again in small groups, to compare the whole-class consensus with relevant passages from Supreme Court decisions that, speaking for a still larger community, define which benefits or privileges American citizens enjoy by "inalienable right" and which ones may be limited or eliminated entirely. The Court's understanding of the term would of course have a lot more authority than the class's understanding of it. And if the class's consensus matches the Court's, the knowledge the class constructed would have the authority of the whole community that the Court represents, the community of American citizens, in which the class-community is nested. If its consensus does not match that larger community's consensus, the teacher asks students to return to small-group discussion. Their task now is not to decide why their consensus was "wrong." Their task is to try to reconstruct the reasoning by which the Justices of the Court might have arrived at a different consensus and compare it with the reasoning by which the class arrived at theirs.

As we shall see in Chapter 7, this process models the collaborative process by which the authority of all knowledge increases, assuming that all knowledge is socially constructed. Communities of knowledgeable peers construct knowledge in an ongoing negotiation to consensus that involves increasingly larger and more complex communities of knowledgeable peers, a conversation in which, as Richard Rorty says in

Philosophy and the Mirror of Nature, community members socially justify their beliefs to one another.

In describing knowledge in this nonfoundational way, Rorty generalizes Thomas Kuhn's description, in *The Structure of Scientific Revolutions,* of the way scientists construct scientific knowledge, a description that in their two-year study of the Salk Institute, *Laboratory Life: The Social Construction of Scientific Facts,* Bruno Latour and Steve Woolgar corroborate. Scientists, they say, construct knowledge in conversation about their work over lab benches and in hallways and offices and by revising what they think in the course of that conversation. This is the conversation of "conjoined intelligence . . . made by confluent, simultaneously raised human voices, explaining things to each other" that Lewis Thomas hears on the beach at the Woods Hole Marine Biological Laboratory in *Lives of a Cell.*[8]

But constructive conversation among members of communities of knowledgeable peers takes different forms. Community members engage in direct, face-to-face conversation: they talk, as college and university students do in small consensus-group discussion and as scientists do on the beach at Woods Hole. More importantly, Latour and Woolgar show, they engage in indirect, displaced conversation: they write to each other. In the next chapter we will discuss the important role that writing plays in the craft of interdependence.

Chapter Six

Teaching and Learning Styles

Diversity is a key term when it comes to understanding the USAWC instructional environment. Students come to us with a diverse range of prior experiences and knowledge sets; faculty are just as diverse, if not more so. Course content ranges from the very applied to the highly conceptual. This section addresses another kind of diversity: differences in learning styles.

Each of us can identify some experience in our lives we can clearly identify with *learning*. We can remember *what we learned*. We can recount what brought about the *need to learn*. But can we identify which among our senses, what kind of empirical interaction with the environment, led us to remember the experience itself? The answer to that question has much to do with our individual *learning style* or our preferences in taking in and using new material. The intersection between learning style and teaching methods is important in diverse learning groups.

Jeff King, faculty development director at the Art Institute of Dallas, will lead us through a session addressing individual learning styles (or preferences) and teaching methods useful in capitalizing on these learning styles. On the pages following is an outline of Jeff's workshop. The "Additional Readings" (below) offer important background necessary for the workshop.

Readings

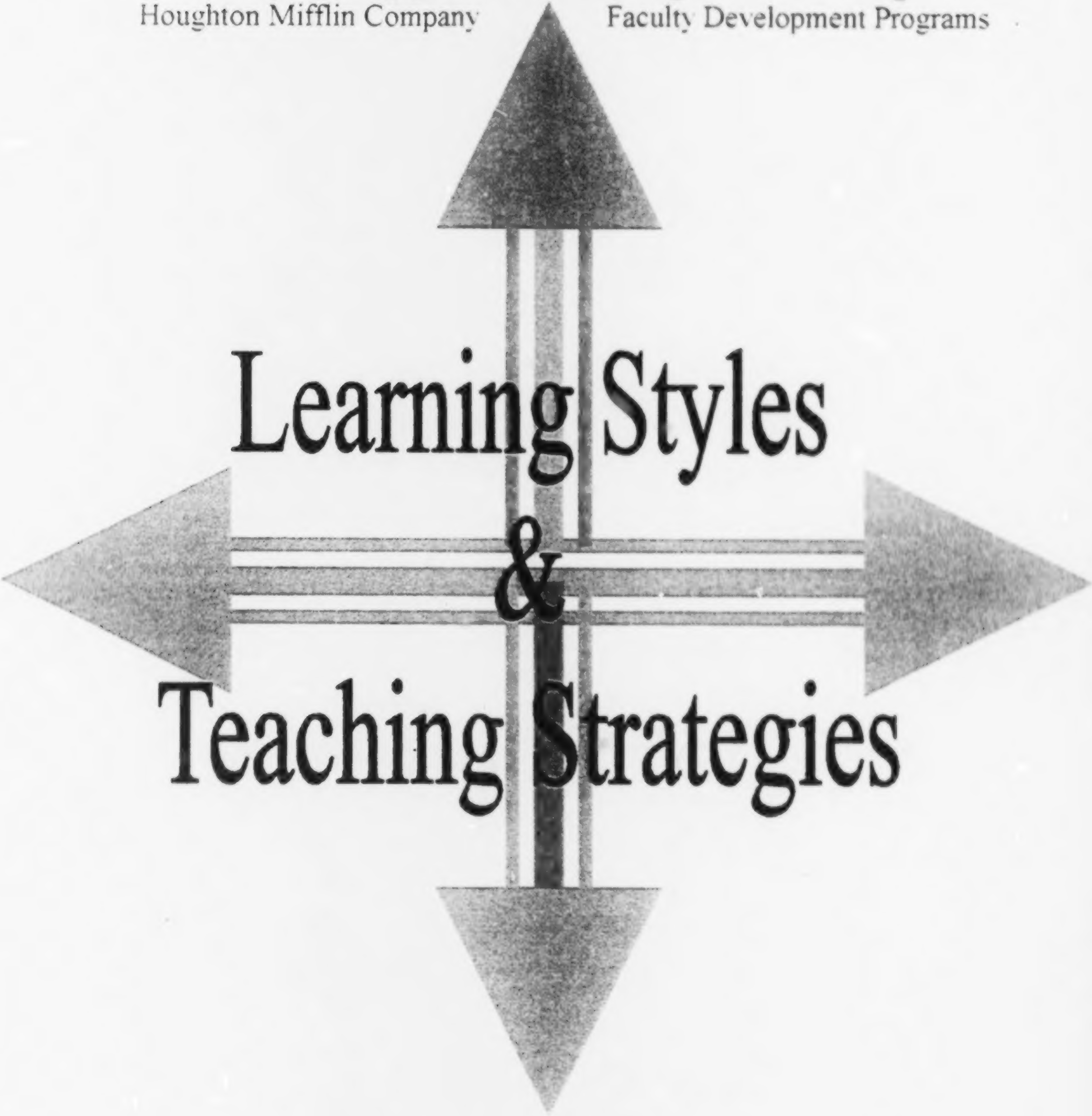
Holcomb, James F. "A User's Guide to the Case Study Method of Teaching", US Army War College, Department of National Security Studies, 1999 (following pages).

King, Jeffrey M. *Learning Styles & Teaching Strategies* (following pages).

McKeachie, W. J. *Teaching Tips: Strategies, Research, and Theory for College and University Teachers*. New York: Houghton-Mifflin Co., 1999 pp. 167-174, 218-234.

Teaching for Learning Workshop

Houghton Mifflin Company Faculty Development Programs



Learning Styles & Teaching Strategies

JEFF KING
ART INSTITUTE OF DALLAS
DALLAS, TEXAS

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Why should faculty concern themselves with learning about, and *using* learning style theory as an instructional method?

Recognizing another person's preferred learning modality is an important key to making your most effective presentation.

—Bobbi DePorter, *Quantum Learning*, p. 122

Teachers want to, and must, make effective presentations in order for their students to learn in ways that make storage and recall of the information more likely.

If the only tool you have is a hammer, every problem looks like a nail.

—Abraham Maslow

To be more effective, teachers must have the tools to help each student learn the material. Since each student is a unique individual with unique learning strategies, teachers must have multiple ways of helping students learn. Those teachers who don't possess multiple tools can fall into the rut of using one teaching style continually, in spite of the fact that for only some of their students is that teaching style the most effective way to transmit information. Such teachers are carpenters who own no tools besides a hammer.

Nothing is more powerful than an idea whose time has come.

—Victor Hugo

Learning Styles

What

" . . . characteristic cognitive, affective, and physiological behaviors that serve as relatively stable indicators of how learners perceive, interact with, and respond to the learning environment."

—Keefe, James W. (1979). Learning style: An overview. In J. W. Keefe (Ed.), *Student learning styles: Diagnosing and prescribing programs*. Reston, VA: National Assn. of Secondary School Principals

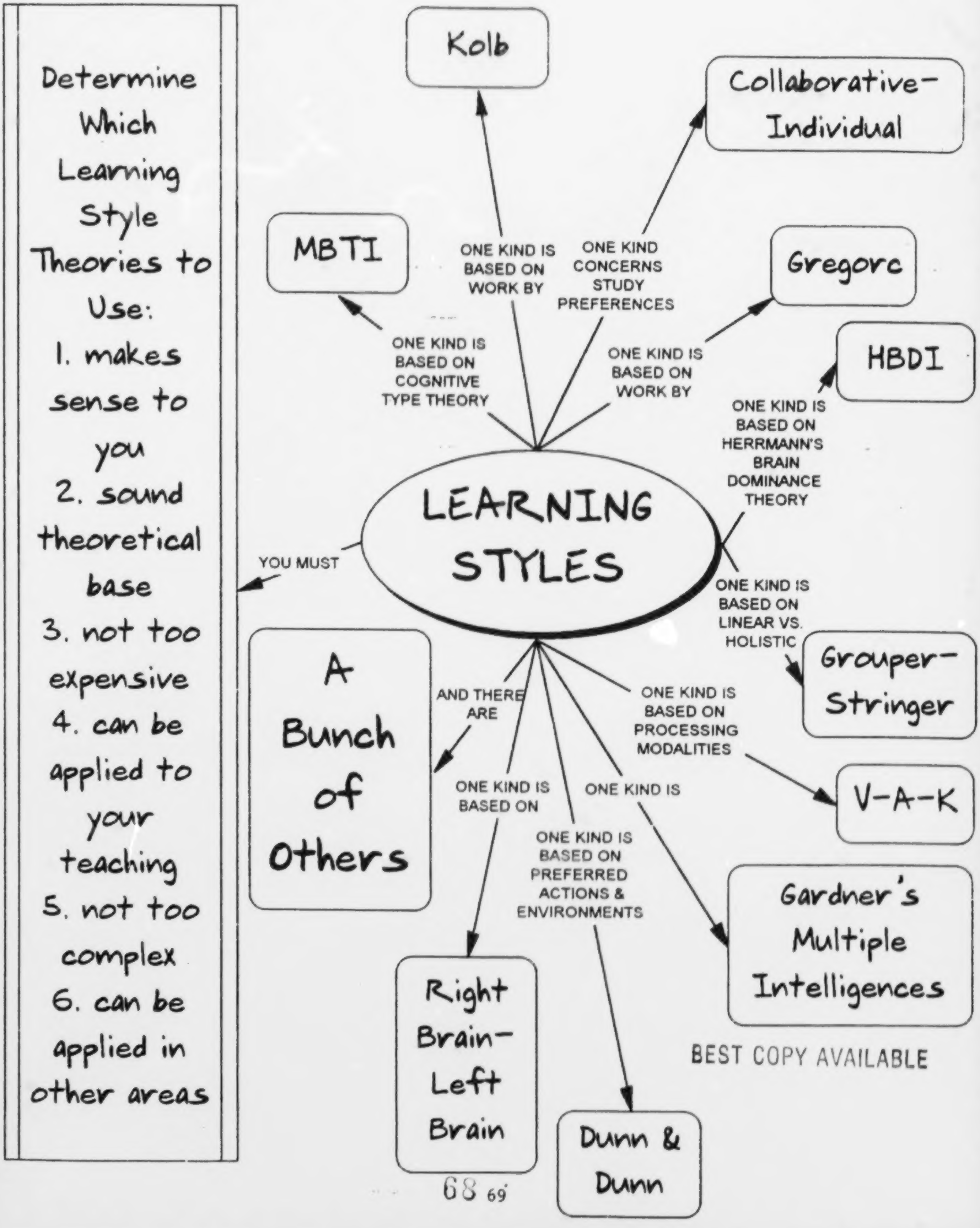
Why

"Having information on style can help faculty become more sensitive to the differences students bring to the classroom. It can also serve as a guide to the design of learning experiences that match or mismatch students' style, depending on whether the purpose of the experience is instrumental or developmental. From students' perspective, evidence indicates that learning about their own style increases their chances of succeeding in courses. At the same time, activities that help them develop strategies for learning in ways other than their predominant style are important. This experience of learning how to learn is an empowering one that can help students become successful lifelong learners."

Claxton & Murrell. (1988). *Learning styles: Implications for improving practice*. College Station, TX: Association for the Study of Higher Eduacation

How

- ➜ Teacher discovers own learning style (probably uses primarily this style to teach, so teacher is now alerted to which teaching styles may need work)
- ➜ Teacher learns how to teach using other styles
- ➜ Teacher learns how to identify learning styles of students
- ➜ Teacher includes instructional activities to appeal to the full range of learning styles & addresses individual students' styles where needed



Determine Which Learning Style Theories to Use:
1. makes sense to you
2. sound theoretical base
3. not too expensive
4. can be applied to your teaching
5. not too complex
6. can be applied in other areas

LEARNING STYLES

YOU MUST

ONE KIND IS BASED ON COGNITIVE TYPE THEORY
MBTI

ONE KIND IS BASED ON WORK BY
Kolb

ONE KIND CONCERNS STUDY PREFERENCES
Collaborative-Individual

ONE KIND IS BASED ON WORK BY
Gregorc

ONE KIND IS BASED ON HERRMANN'S BRAIN DOMINANCE THEORY
HBDI

ONE KIND IS BASED ON LINEAR VS. HOLISTIC
Grouper-Stringer

ONE KIND IS BASED ON PROCESSING MODALITIES
V-A-K

ONE KIND IS
Gardner's Multiple Intelligences

ONE KIND IS BASED ON PREFERRED ACTIONS & ENVIRONMENTS
Dunn & Dunn

ONE KIND IS BASED ON
Right Brain-Left Brain

AND THERE ARE
A Bunch of Others

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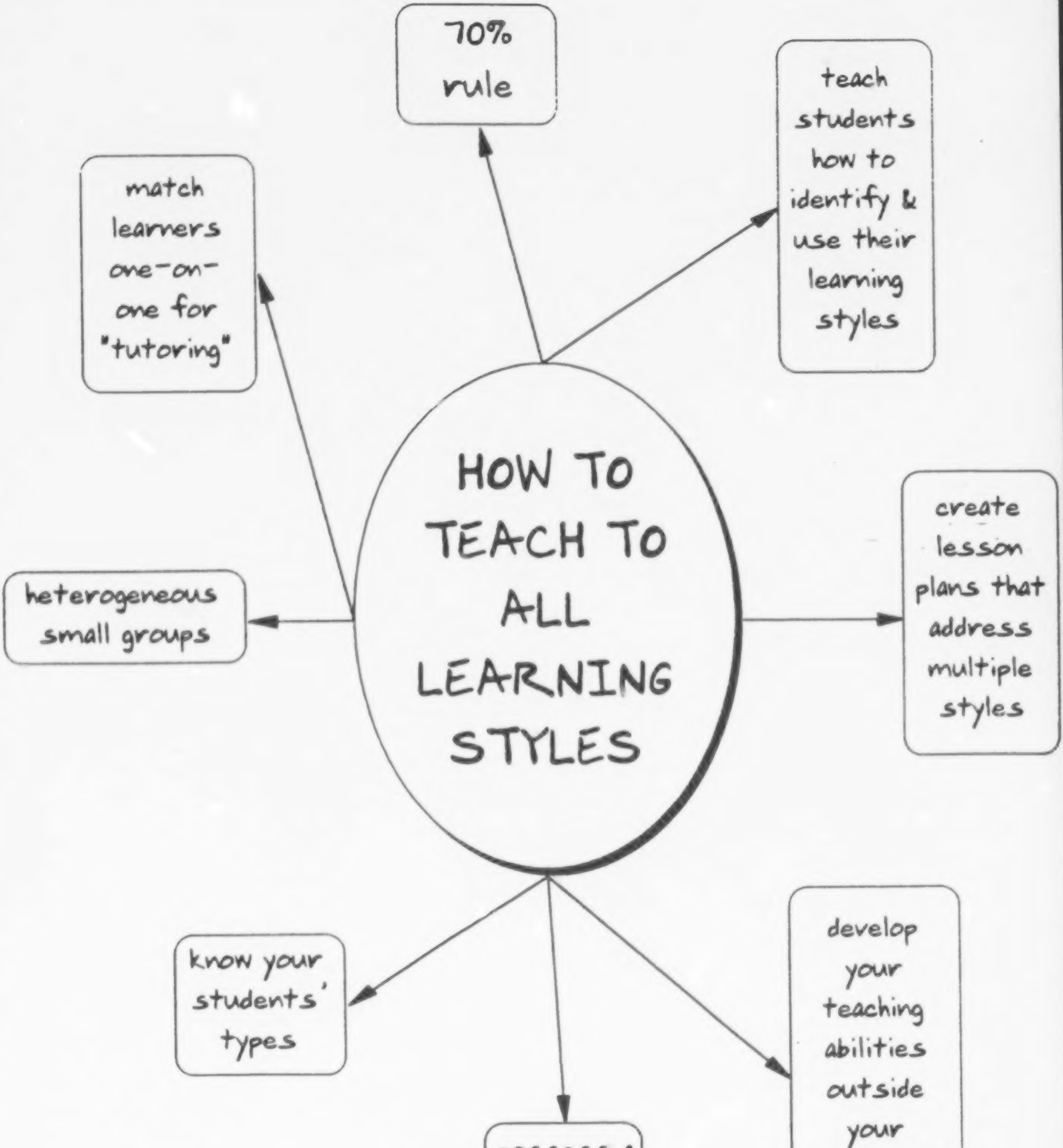

HOW TO TEACH TO ALL LEARNING STYLES
70% rule
teach students how to identify & use their learning styles
create lesson plans that address multiple styles
develop your teaching abilities outside your preferred style
possess a toolkit with many tools
know your students' types
heterogeneous small groups
match learners one-on-one for "tutoring"

V-A-K Learning Styles: Descriptive Overview

VISUAL

You are more *visual* if you spell, read, and visualize well; talk or respond faster than most; see pictures in your head; love watching people, things, and movies; use expressions like "see what I mean," "get the picture," and "from my point of view"; eat to live (instead of live to eat); like your clothes to match; like things neat; and don't mind noise.

AUDITORY

You are more *auditory* if you spell poorly, talk to yourself, like hanging out with friends, use the phone a lot, recall lyrics to songs easily, dislike writing, dislike written or standardized tests, like the dialogue in movies, become distracted easily, learn languages easily, memorize in small steps, and raise and lower your voice often.

KINESTHETIC

You are more *kinesthetic* if you learn best by doing; fidget a lot when you're not comfortable in a chair; like to get up and move around; often feel hungry, tired, or energized; like action or emotional movies; dislike small-print writing; like computers; like to touch others while talking; are comfortable standing close to others.

—from *B's and A's in 30 Days* by Eric Jensen, p. 260

Recognizing V-A-K Processors: Common Modality Verbal Cues

Visual

- appears to me
- bird's-eye view
- catch a glimpse of
- clear-cut
- dim view
- eye to eye
- get a scope on
- get the picture
- hazy idea
- "I can see that"
- in light of
- in person
- in view of
- "it looks right"
- looks like
- mental image
- mind's eye
- pretty as a picture
- see to it
- short-sighted
- showing off
- tunnel vision

Auditory

- all ears
- call on
- clear as a bell
- clearly expressed
- describe in detail
- earful
- give me your ear
- hear voices
- hidden message
- idle talk
- loud and clear
- outspoken
- rap session
- rings a bell
- "that clicks"
- "that rings a bell"
- "tell me again . . ."
- to tell the truth
- tuned-in/tuned-out
- unheard of
- voiced an opinion
- within hearing range

Kinesthetic

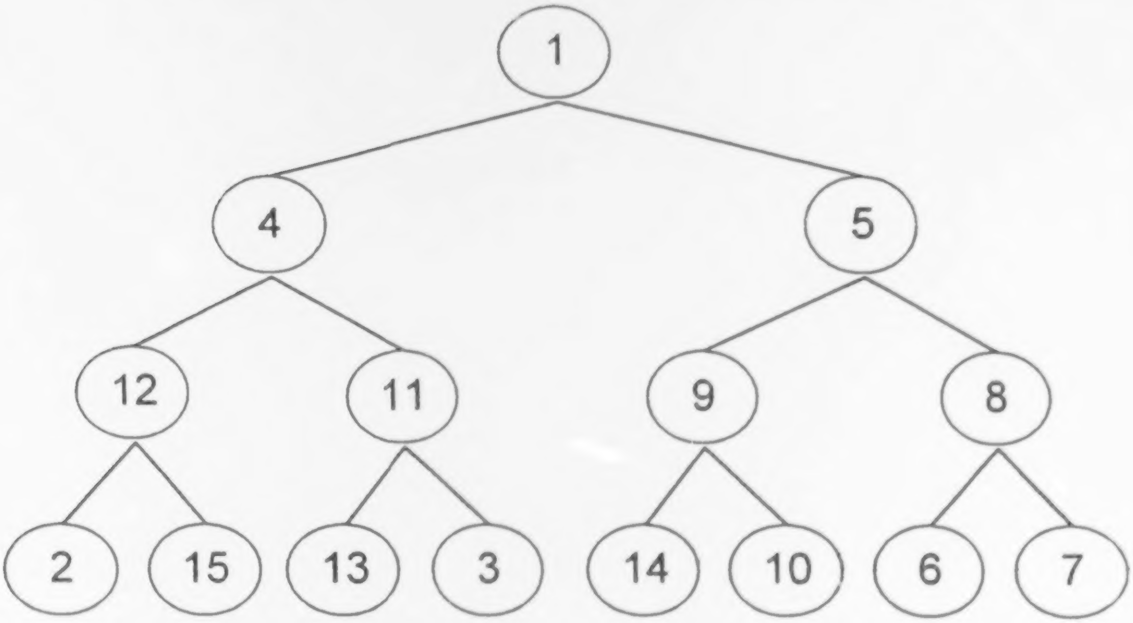
- all washed up
- boils down to
- "I'll hook you up"
- come to grips with
- floating on thin air
- get a handle on
- get a load of this
- get in touch with
- get the drift of
- hang in there
- hold it!
- hothead
- it feels right
- lay cards on the table
- pull some strings
- sharp as a tack
- slide by
- slipped my mind
- start from scratch
- stiff upper lip
- too much hassle
- underhanded

Under stress, students "downshift" to their preferred modality for retrieving stored information.

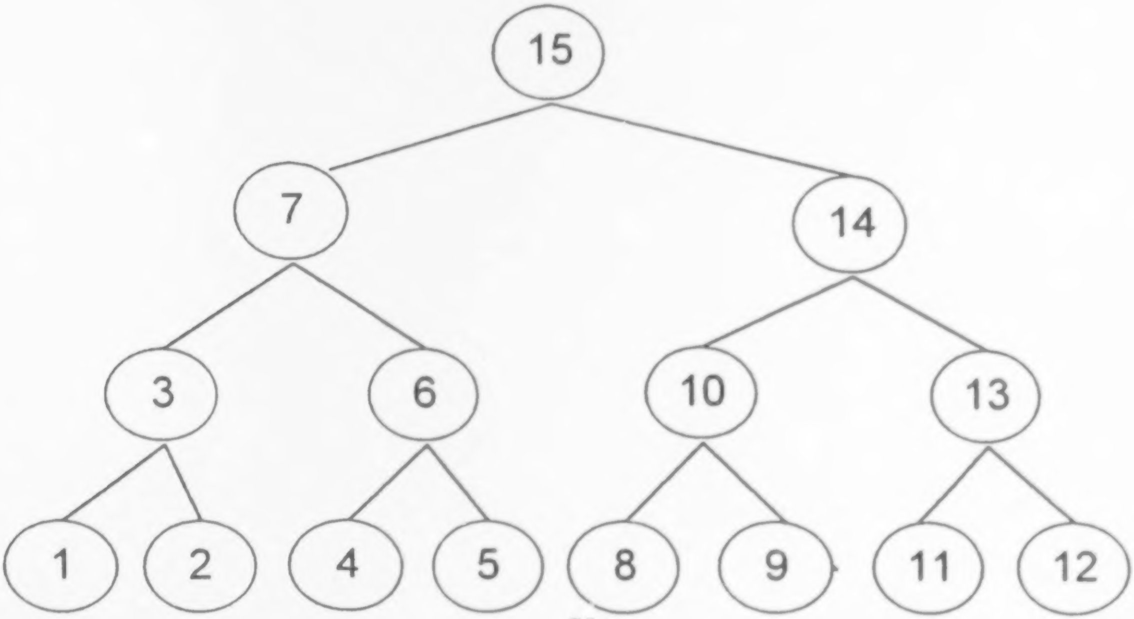
Because learning is state dependent, students generally recall information easiest by using the same modality with which it was stored.

Note: Numbers below relate to the sequence in which
subtopics are learned.

Holistic (Grouper) Learning Strategy



Serialistic (Stringer) Learning Strategy



Resources

Publications

Buzan, T. (1989). *Use both sides of your brain*. New York: Plume. Info on Left/Right Hemisphere, mind-mapping, and memory techniques.

Claxton, C. S., & Murrell, P. H. (1987). *Learning styles: Implications for improving educational practices*. College Station, TX: Association for the Study of Higher Education. Overview of research on many different learning style theories (V-A-K not included).

DePorter, B., & Hernacki, M. (1992). *Quantum learning: Unleashing the genius in you*. New York: Dell Publishing. Info on V-A-K and Gregorc learning styles plus a nifty overview of many other brain-compatible teaching and learning theories and techniques.

Dilts, R., & Epstein, T. (1995). *Dynamic learning*. Capitola, CA: Meta Publications. V-A-K resource; also contains info on research into examining the learning process by modeling physiological processes of exceptional learners.

Dryden, G., & Vos, J. (1994). *The learning revolution: A life-long learning program for the world's finest computer: your amazing brain!*. Rolling Hills Estates, CA: Jalmar Press. Wonderful compendium of tips and techniques for brain-compatible teaching and learning.

Gardner, H. (1993). *Frames of mind: The theory of multiple intelligences* (2nd ed.). New York: BasicBooks. The source for the theory of multiple intelligences.

Herrmann, N. (1993). *The creative brain*. Lake Lure, NC: The Ned Herrmann

Group. Theory behind Herrmann Brain Dominance Instrument.

Jensen, E. (1997). *B's and A's in 30 days*. Hauppage, NY: Barron's Educational Services. Tips to the learner about how to study and learn more easily and effectively; teachers can use this to decide how to present material in ways that will make it easier for their students to learn.

Jensen, E. (1995). *Brain-based learning and teaching*. Del Mar, CA: Turning Point Publishing. Overview of information about how to learn more effectively and how to teach in ways to take advantage of that information.

Jensen, E. (1995). *Super-teaching: Master strategies for building student success* (Rev. ed.). Del Mar, CA: Turning Point for Teachers. Great book of teaching techniques; explains the *why* as well as the *how*.

Jensen, E. (1994). *The learning brain*. Del Mar, CA: Turning Point for Teachers. Excellent collection of teaching suggestions based on research findings about how human brains work.

Kroeger, O., & Thuesen, J. M. (1988). *Type talk: The 16 personality types that determine how we live, love, and work*. New York: Dell. Information about how to use knowledge of one's own MBTI profile to improve relationships, effectiveness, and quality of life.

Lewis, D., & Greene, J. (1982). *Thinking better: A revolutionary new program to achieve peak mental performance*. New York: Holt & Company. Info on grouper/stringer theory.

Mamchur, C. (1996). *A teacher's guide to cognitive type theory and learning style*. Alexandria, VA: Association for Supervision and Curriculum Development. Specific information for teachers on how to

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use MBTI theory to teach effectively to all MBTI profiles in a classroom.

Marguiles, N. (1991). *Mapping inner space*. Tucson, AZ: Zephyr Press. How to create mind maps.

Novak, J. D., & Gowin, D. B. (1984). *Learning how to learn*. New York: Cambridge University Press. Theory behind concept mapping; how to create concept maps; how to use concept maps as an instructional device.

Van Nagel, C. V., Reese, E. J., Reese, M., & Siudzinski, R. (1985). *Mega teaching and learning*. Portland, OR: Metamorphous Press. The most detailed, comprehensive source for specific ways to teach to all learning preference modalities (V-A-K).

Williams, L. V. (1983). *Teaching for the two-sided mind*. New York: Simon and Schuster. Info on Left/Right Brain aspects of learning and how to teach to both sides.

Some On-line Resources on Learning Styles

Learning Styles Site, Indiana State University Center for Teaching and Learning: http://www-isu.indstate.edu/ctl/styles/

Quality Education Systems (commercial provider of learning styles information and consulting services): http://www.dallas.net/˜qes

Excel Corp. (commercial provider of information on the 4MAT system): http://www.excelcorp.com

On-line Learning Style Inventory Test w/Scoring: http://www.hcc.hawaii.edu/intranet/committees/FacDevCom/guidebk/teachtip/lernstyl.htm

lsi.rtf from http://www.hcc.hawaii.edu/hccinfo/facdev/lsi.html

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LEARNING STYLE INVENTORY

Directions:

To gain a better understanding of yourself as a learner, you need to evaluate the way you prefer to learn or process information. By doing so, you will be able to develop strategies which will enhance your learning potential. The following evaluation is a short, quick way of assessing your learning style.

This 24 item survey is not timed. Answer each question as honestly as you can.

Place a check on the appropriate line after each statement

	OFTEN	SOMETIMES	SELDOM
1. Can remember more about a subject through the lecture method with information, explanations and discussion.	____	____	____
2. Prefer information to be written on the chalkboard, with the use of visual aids and assigned readings.	____	____	____
3. Like to write things down or to take notes for visual review.	____	____	____
4. Prefer to use posters, models, or actual practice and some activities in class.	____	____	____
5. Require explanations of diagrams, graphs, or visual directions.	____	____	____
6. Enjoy working with my hands or making things.	____	____	____
7. Am skillful with and enjoy developing and making graphs and charts.	____	____	____
8. Can tell if sounds match when presented with pairs of sounds.	____	____	____
9. Remember best by writing things down several times.	____	____	____
10. Can understand and follow directions on maps.	____	____	____
11. Do better at academic subjects by listening to lectures and tapes.	____	____	____
12. Play with coins or keys in pockets.	____	____	____
13. Learn to spell better by repeating the words out loud than by writing the word on papers	____	____	____
14. Can better understand a news article by reading about it in the paper than by listening to the radio.	____	____	____

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15. Chew gum, smoke, or snack during studies. _____ _____ _____

16. Feel the best way to remember is to picture it in your head. _____ _____ _____

17. Learn spelling by "finger spelling" words. _____ _____ _____

18. Would rather listen to a good lecture or speech than read about the same material in a textbook. _____ _____ _____

19. Am good at working and solving jigsaw puzzles and mazes. _____ _____ _____

20. Grip objects in hands during learning period. _____ _____ _____

21. Prefer listening to the news on the radio rather than reading about it in the newspaper. _____ _____ _____

22. Obtain information on an interesting subject by reading relevant materials. _____ _____ _____

23. Feel very comfortable touching others, hugging, handshaking, etc. _____ _____ _____

24. Follow oral directions better than written ones. _____ _____ _____

SCORING PROCEDURES

DIRECTIONS:

Place the point value on the line next to the corresponding item. Add the points in each column to obtain the preference scores under each heading.

OFTEN = 5 points
SOMETIMES = 3 points
SELDOM = 1 point

VISUAL		AUDITORY		TACTILE	
NO	PTS.	NO.	PTS.	NO.	PTS.
2	_____	1	_____	4	_____
3	_____	5	_____	6	_____
7	_____	8	_____	9	_____
10	_____	11	_____	12	_____
14	_____	13	_____	15	_____
16	_____	18	_____	17	_____
19	_____	21	_____	20	_____
22	_____	24	_____	23	_____

VPS = APS = TPS =

·lsi ntf

VPS = Visual Preference Score
APS = Auditory Preference Score
TPS = Tactile Preference Score

If your are a VISUAL learner, then by all means be sure that you look at all study materials. Use charts, maps, filmstrips, notes and flashcards. Practice visualizing or picturing words/concepts in your head. Write our everything for frequent and quick visual review.

If you are a AUDITORY learner, you may wish to use tapes. Tape lectures to help you fill in the gaps in your notes. But do listen and take notes, reviewing notes frequently. Sit in the lecture hall or classroom where you can hear well. After you have read something, summarize it and recite it aloud.

If you are a TACTILE learner, trace words as you are saying them. Facts that must be learned should be written several times. Keep a supply of scratch paper for this purpose. Taking and keeping lecture notes will be very important. Make study sheets.

Return to How People Learn Document Guide
Return to Faculty Development Teaching Guidebook Introduction

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Learning Style Inventory: Grouper/Stringer

Choose your preference between *G* and *S*:

1. When studying an unfamiliar subject, do you:

    G. prefer to gather information from many topic areas?
    S. prefer to stay fairly close to the central topic?

2. Would you rather:

    G. know a little about a great many subject?
    S. become an expert on just one subject?

3. When studying from a textbook, do you:

    G. skip ahead and read chapters of special interest out of sequence?
    S. work systematically from one chapter to the next, not moving on until you have understood earlier material?

4. When asking others about some subject of interest, do you:

    G. tend to ask broad questions which call for rather general answers?
    S. tend to ask narrow questions which demand specific answers?

5. When browsing in a library or bookstore, do you:

    G. roam around looking at books on many different subjects?
    S. stay more or less in one place, looking at books on just a couple of subjects?

6. Are you best at remembering:

    G. general principles?
    S. specific facts?

7. When performing some task, do you:

G. like to have background information not strictly related to the work?
S. prefer to concentrate only on strictly relevant information?

8. Do you think that educators should:

G. expose students to a wide range of subjects in college?
S. ensure that students mainly acquire extensive knowledge related to their specialties?

9. When on vacation, would you rather:

G. spend a short amount of time in several different places?
S. stay in just one place the whole time and really get to know it?

10. When learning something, would you rather:

G. follow general guidelines?
S. work from a detailed plan of action?

11. Do you agree that, in addition to his/her specialized knowledge, an engineer should know something about some or all of the following: math, art, physics, literature, psychology, politics, languages, biology, history, medicine? If you agree and select *four or more* of the subjects, then score a *G* on the question. If *less than four*, then score an *S*.

G. four or more of the subjects
S. less than four of the subjects

Total number of *Gs*: ______________ Total number of *Ss*: ______________

A USER'S GUIDE TO THE CASE STUDY METHOD OF TEACHING

COL James F. Holcomb
Department of National Security and Strategy
U.S. Army War College

1. Introduction.

Teaching using case studies can be an effective, exciting, dynamic and sometimes frightening experience. It requires preparation on the part of both student and instructor but when done well, is a valuable and enriching tool for achieving learning objectives in the classroom. It is especially effective in teaching students "how to think" as opposed to "what to think". It lends itself well to our particular challenge here of teaching strategic thinking where "victory" or "end state" is an elusive concept, environments are complex and unpredictable and multiple strategic outcomes are possible. Students are challenged to use critical thinking skills, role playing, questioning and non-linear analysis to examine issues in their strategic totality. This requires some significant "classroom management" on the part of the instructor; the right question is more important than providing the "right" answer. This makes it important for us as faculty instructors to understand not only what case studies are, but how to identify (or write) them and most importantly, how to use them.

2. What are Case Studies?

All of us think we know what a case study is. Indeed, many of us use case studies informally in our teaching everyday when we use or solicit examples of particular principles under discussion. There are, however, some basic characteristics of case studies that make them unique teaching tools. A good case study is simply a story with multiple decision points embedded in it. This provides the basis for multiple possible outcomes and hence a basis for comparison and discussion. Thus a case study generally has an open end. This contrasts markedly with the sound academic paper leading the reader down a thoroughly researched path to a logical and finite conclusion. Although factually accurate, a case study doesn't necessarily have to have an end state or conclusion. A case study is a vehicle or a tool for discussion, examination and analysis. It is a carrier wave for other information or teaching points. It is an enabling methodology to get at something else. It is not an end in itself, but a means to an end.

In general terms there are two types of case studies. **Illustrative** case studies are used to illuminate concepts, theories and principles through a real world situation. In our context, analysis of campaign vignettes to illustrate particular strategic concepts and principles would be an example of this type of case study. **Experiential** case studies place the student in the role of decision-maker and may indeed require some role-playing. An example of this type would be an analysis of decision making during the Cuban Missile Crisis where students would have to represent the position and perspectives of the relevant characters. Typing of case studies is based primarily on how it is used rather than strictly how it is written. For example, a well-written case study can be used for multiple purposes to both illustrate concepts and analyze decision making.

3. How do we use Case Studies?

If we acknowledge that case studies are a tool that we can use in teaching, it follows that they are not the only tool. It is just as important to understand when not to use case studies as it is when to use them. Some lessons or teaching objectives in a varied curriculum simply do not lend themselves to using case study methodology. If there is a requirement that students finish a lesson with a body of requisite knowledge firmly implanted, then perhaps a lecture with appropriate graphics is the right tool. As stated earlier, case studies are best utilized as a vehicle for getting at ideas through dynamic thinking and discussion, not necessarily to acquire specific knowledge. In any event, the most important step in considering whether or not to use case studies is to identify what the learning objectives of the lesson or block are. If one is dealing with concepts or theory in the abstract, principles or decision-making dynamics for example, then a case study may be an appropriate vehicle to use. It helps to place the abstraction into a real world context and force the student to grapple with alternatives or "how-would-I-have-done-it" type issues.

Having identified the learning objectives and concluded that a case study is the appropriate teaching tool, where does one go to find them? There are three general sources. First, prepared case studies are available through various institutions and one simply needs to find the appropriate case to support the lesson at hand.[*] This can be problematic however, as the quality of case studies can vary widely. In addition, appropriate case studies for our unique academic requirements for educating strategic leaders can be difficult to find. Second, the instructor can use published articles, papers or monographs. This has to be done with some care (and perhaps editing) however. One should avoid using a paper that is thesis based, that is, has a firm conclusion that predisposes the students to buying-in to that author's thinking. One technique that could be used to overcome this tendency is to edit out the conclusion and use it as a follow up to the case study discussion. The third, and from our perspective, most ideal source is to write the case study oneself. This has an obvious disadvantage of taking time. The benefit however, is that knowing the ends we are trying to achieve allows us to craft the case study for our own purposes and not be forced to adapt someone else's work to our objectives.

Considering the use of case studies should be inherent in the course and curriculum development process. However, case studies should be integrated into a considered mix of other tools and teaching techniques in support of the adult learning model. In our department, there are individual instructors responsible for the development of specific lessons for the entire department. Likewise, there are individuals responsible for the integration of separate lessons into a larger encompassing block or module so as to ensure a logical flow of learning within and between blocks. Case studies can be considered for use by the individual lesson author to achieve that lesson's objectives. Alternatively, a case study may be selected or designed as a wrap-up activity for a block of lessons to bring together multiple concepts or principles. This requires some particular skill and interaction on the part of both lesson authors and block managers to recognize which approach best supports learning. This is part of the larger overall integration and synchronization effort by lesson authors, block coordinators and course directors in curriculum design.

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[*] For our purposes, the two most familiar sources are the Kennedy School of Government at Harvard University (www.ksgcase.harvard.edu) and Georgetown University's Pew Case Studies in International Affairs (www.georgetown.edu/sfs/programs/isd/files/cases/pew) but there are many others as well for those willing to search.

Another option is to use a single case study over several lessons or even over several blocks. It is resurrected and examined from multiple perspectives based on the lesson emphasis for that particular day. The disadvantage of this approach however, is that the students can become jaded with the case and lose interest. Use of several stand-alone cases also allows the student to cover more ground in a historical or conceptual sense. Having said that, there are and will be instances where use of a single case study for multiple purposes is most appropriate. Operations analysis (or perhaps better "analysis of operations") may be an example of that. The operation acts as the vehicle for the discussion of multiple principles of joint doctrine, command and control, decision points, friction, airpower, logistics, the relationship of military strategy to policy objectives and so on.

Case studies are not limited to the written form that most of us are familiar (and comfortable) with. The advent of inexpensive softwear allows the integration of a variety of media into new forms of presentation. The use of film or extracts from films, audio recordings from newly available archives, transcripts, Freedom of Information Act materials are all valid "raw material" for case study development. For example, our department used a computer based multi-media presentation of newly released recordings of President Johnson and his advisors in 1964-1965 in support of a lesson on national security decision making. The point is that case studies can and increasingly will take on different forms and technology can help us exploit materials in new and unique ways.

In addition to the use of formal case studies for teaching, "case studies of opportunity" should not be overlooked. This is simply taking advantage of a topical event, subject or dynamic that happens to coincide with the lesson[s] underway. The intent here is to illustrate principles and concepts as they apply (or not) to events as they are unfolding in real-time. Recent examples using this technique include the impeachment process applied against the lessons on the Constitutional relationship between the President, the Congress and the Supreme Court; the JCS in their testimony before Congress on readiness; the development of military strategy for Iraq; identification of US national interests in Kosovo; the effect of a National Missile Defense on strategic deterrence and so on. Using case studies of opportunity simply requires the instructor to be aware of what is going on in the real world that has application to the abstract concepts, principles and dynamics under discussion in the classroom. This reinforces learning and piques student interest. The Early-Bird is an excellent and quickly read source for these mini-case studies.

4. How do we write Case Studies?

If the decision is taken to write a case study in support of particular learning objectives, there are some points to be considered. First, and not least important is to consider the length of the case. The more complicated the case, generally the longer it will be in the writing. This can become challenging for students, especially if the case is one of a number of required readings for that day. The success of using case studies in the classroom depends on the students being thoroughly grounded in the facts of the case. This argues for shorter is better. A gross generalization would be that 10-15 pages is about right for the lessons we are writing in our department. This, of course, is not a rule and one-page case studies are possible (a "what do you do now Lieutenant" type of case). A major exception would be a single case study used over several lessons or blocks. This would be a more complex undertaking and the requirement for students to immerse in detail substantially higher; this would obviously increase length.

It is important to understand how the case study will be used. If trying to illuminate concepts, theories and principles, an illustrative case study is called for. If trying to analyze decision-making dynamics, an experiential case study is better suited. If the intent is to do both (perhaps over multiple lessons), then elements of both types should be included. However, a "one-size-fits-all" clearly would be more difficult in the writing.

At it's simplest, a case study is a story. More specifically for our purposes, it is a story about decision making and strategic outcomes. Characters should be fully developed, strategic and historical context should be clear and the case should flow; it should be an easy and interesting read. It often is episodic, that is to say it focuses on a specific episode or moment in time: a critical decision point for example or a situation with unresolved issues.

Although footnoting and bibliographic references are not requirements, the case study should rest on a solidly researched foundation of fact. This precludes an attack on the credibility of the case study itself; that would detract from its intended use in learning. Although "true" it does not necessarily have to be the all-encompassing "truth". The writer may intentionally wish to leave out some elements to provide material or questions for discussion. The case study should give a feel to the student of "unfinished business". Problems should be posed in the reading giving the student issues to consider and fuel for the discussion.

Most case studies should have a Part II. After the instructor has exploited the branches and sequels of discussion to the maximum, a follow-on could be provided to the students. This can take various forms. One may be a short description of an analogous incident separated by time to give the students a different perspective on an issue (an example used in a recent workshop was fixing of command responsibility for Khobar Towers compared to Pearl Harbor). Another type of Part II may be a continuation of the current situation or case under discussion; a "rest of the story" type of piece. This in turn can serve as a basis of continued discussion or the instructor may use it as the lead-in to a concluding wrap-up.

The writer should consider including "supplementals" in the case study. These can take the form of evidence (transcripts, PDDs, legal documents, etc) that support the case study. Done well, the student is better prepared to put himself "in character" for discussion. It also provides some satisfaction for the student who wants go below the surface of the case study to another level of detail, to "see for himself". This can assist in establishing credibility for the case study and thereby contribute to discussion and better learning. A simple yet extremely valuable supplemental is a chronology of events. Providing the chronology separately allows the writer to concentrate on telling the story and raising issues without an excessively detailed description of what happened when.

Finally, the case study writer may wish to formulate student and/or instructor notes. These may be different. Student notes can assist the student in preparing for class by posing questions or issues for consideration. This serves to "front load" the students on the main discussion points they can expect. If the writer/instructor prefers that the issues be identified in the course of discussion itself, then of course, student notes are not necessary. The work is done on-site in the classroom. Instructor notes, however, are a different issue. A number of instructors will be using the writer's case study and of course will not have the same familiarity with it as the writer himself. At a minimum, the case study writer should provide framing questions that allow the other instructors to guide or "herd" the discussion to the learning objectives or issues to be considered.

Ultimately, it is the need of the student and the capabilities of the faculty that determines the character of the case study. The level of sophistication must account for the majority or mean abilities of the faculty while not discouraging us from examining new approaches and techniques for learning and teaching.

5. How do we teach Case Studies?

Teaching using case studies is based on the Socratic model using leading questions to encourage critical thinking and elicit discussion and debate. This is a technique that should be familiar to all of our instructors and is used commonly in the seminar adult-learning environment. Additionally, experiential case studies lend themselves to role-playing. Students may be assigned particular roles or perspectives to represent prior to the class or alternatively, questions may be directed to students in a role context in the course of the class itself. The intent is to place the student in a situation to elicit a perspective historically and contextually different from "truth" as we may interpret events in hindsight.

Teaching case studies (or seminar teaching in general) requires the instructor to manage several different dynamics in the classroom not dissimilar to conducting an orchestra. The instructor must recognize when students are approaching learning objectives, deflect distracters, allow maximum free expression without dead-ending discussion, think ahead and watch the clock. Classroom management decisions will be taken "on the run". Watching body language, being aware of emotional baggage and identifying the "expert" on a topic are all essential instructor skills. When done well, the experience is dynamic, enriching and enjoyable for both students and instructor.

One of the valuable learning processes inherent in using case studies is subverting student views on particular situations. This is intended to force the student to examine an issue from a different perspective. Some, if not many, students will approach a case study or issue with preconceived or inherited opinions. Having identified those establishes a baseline from which to expand discussion to other views and positions. The object again is to encourage critical thinking, not necessarily to arrive at a "right" answer.

A good source for understanding seminar dynamics and instructor skills is the book Education for Judgement, edited by C. Roland Christensen of Harvard. Chapter Nine in particular addresses the structure of discussion teaching. The pattern is based on questioning, listening and responding (summarizing) leading to further questioning.

As stated earlier, the minimum an instructor needs going into a case study discussion is a list of good questions. This is the framework and foundation of the classroom dynamic. Good questions, as Christensen says, "are infinitely generative". They are the catalyst, the start button for everything that follows.

The ability to listen (on many levels) may be the most important skill for an instructor to develop. It is in listening to responses and discussion points that the instructor acquires the clues of where the students are and where they are going and, in turn, allows him to guide the discussion to where it should be.

Perhaps the most difficult skill to acquire is the instructor response. Christensen calls it "instant artistry" and it does call for perception, acute situational awareness and judgement. Responses can take various forms: a further question; a request for more detail; a restatement of a student's comment to solicit reaction; a personal analysis or summing up by the instructor; soliciting an opposing or differing view from other students. The important thing is to recognize the role of the response as a linking element in the larger learning process. It provides acceleration to the discussion and contributes to maintaining the momentum in the classroom. Although much of the instructor's decision making will be "audibled" off of the students, development of a rough "branches and sequels" outline, even if only in the instructor's head, will help to keep discussion on track and directed at the ultimate learning objectives for the lesson. Appropriate use of the response allows the instructor to orchestrate the discussion. He can take it from the case situation and extrapolate to abstract concepts and then back to the case or examine the problem or issue from a higher or lower level of detail or come at it from a different actor's perspective. The options are many and varied and provide texture to the discussion and flexibility for the instructor.

6. Conclusion.

Use of the Case Study Method can be an extremely effective tool in teaching the concepts and principles of the strategic art and strategic level decision making. Potential case studies authors should consider several questions before beginning case study development or lesson design using case studies. What are we trying to achieve in the lesson? What is it we want the students to understand? Is a case study the best mechanism for achieving that understanding? Are there case studies already developed that can be used? Can an article be modified for use? Will it have to be written? Who will do it? Time, resources involved?

In addition to understanding the characteristics and methodology of case study development, it is just as important to understand how case studies should be used in the classroom. Instructors must be familiar with the Socratic techniques of questioning, listening and responding in an adult learning environment. They must be adept at sensing where a seminar is and where it has to go. The collective student learning dynamic must be "orchestrated" by the instructor. This requires additional skills, some of which can be learned and the rest acquired through actual experience. The instructor must be confident in his own abilities to guide the seminar through the case study experience to achieve learning. Faculty development, both centralized and decentralized (to include faculty mentoring) are essential supporting activities to develop that confidence and ability.

Finally, it must be clear that case studies and case study development are not ends in themselves. They are a means to an end, that being in our case, the development of strategic theorists, leaders and practitioners. They are a tool in a kit bag of other tools of teaching and learning. But when the conditions are right and the job is at hand, they can and should be the tool of choice.

Chapter Seven

Writing and Graduate Study: Critical Thinking on Paper

The concept of "critical thinking" is central to our work with students at the USAWC. Critical thinking, in its simplest expression, is "thinking outside the box". Dr. Herb Barber (DCLM) will discuss the USAWC approach to critical thinking during the ILP/SRP panel. This section applies the practice of critical thinking to the written assignments students will produce during the academic year.

Writing and graduate study are historically and intellectually linked. Writing ideas down on paper are how these ideas usually are transmitted and preserved for the ages. (Critical thinking and oral expression tend to be more time-bound and transient.) Writing is central to the USAWC program of study, manifesting itself first in the ILP, and carried forward through each course and the SRP.

The primary learning objective in writing is developing a student's ability to make a reasoned argument respecting a position, idea or premise. Assessment of student writing should be undertaken from that perspective. Rhetoric is an appropriate measure of success if the writing assignment is rhetorically-based (e.g., a lobbying position statement). Otherwise, writing, linked to critical thinking, is reason-based (not emotion-based) and empirically-grounded.

Writing is not a product so much as it is a process. In particular, the SRP is a process of argument-building. In class, however, time constraints sometimes lead us to believe that writing must be a one-shot product because we need to get it done before the course is over. This view limits the usefulness of writing as an instructional technique. Ideas (and the writing expressing them) develop over time; students need to understand this process and the mentoring relationship that can emerge from it.

Using interactive techniques, this workshop focuses on helping students see and assess the many sides of issues, applying an analytical/synthesis technique useful at the graduate level. Topics addressed will include finding and developing a problem statement/thesis, developing reasoned arguments, and written presentation.

Dr. Carol Barton holds a PhD in English Literature and has taught at the graduate level for the last ten years. She has worked in the US Army Community and Family Support Center in Alexandria, Virginia, as well as in the business community.

Readings

Christensen, C. Roland et al. *Education for Judgement: The Artistry of Discussion Leadership.* Cambridge, MA: Harvard Business School Press, 1991, pp. 249-261

McKeachie, W. J. Teaching Tips: *Strategies, Research, and Theory for College and University Teachers.* New York: Houghton-Mifflin Co., 1999 pp. 132-142.

Chapter Eight

Tools for the Trade: Using Technology in the Classroom

The classrooms at the USAWC are among the best equipped on any college campus. In addition to the traditional white-boards (replacing the black- or green-boards those of us of a certain age remember fondly), overheads, and projectors, each seminar room has a personal computer equipped with PowerPoint, an Elmo, and access to resources within and outside the USAWC—all from the instructor's seat. This technology is impressive, and maybe a little intimidating to those unaccustomed to it. This workshop is designed to give you some familiarity with the equipment, the chance to have some hands-on practice with it, and to help you become familiar with the basic functions and operations of the instructor's control panel.

COL Timothy D. Harrod is the USAWC's Director of Education Technology. He will conduct this workshop, drawing on his understanding of the USAWC teaching experience from both the faculty- and student-perspectives.

While we have an impressive array of instructional aids, it is important to remember that fancy gadgetry is no substitute for effective instructional practices. The equipment in the seminar room is designed to enhance otherwise effective instructional practices.

Readings

Classroom handbook (following pages)

McKeachie, W. J. Teaching Tips: *Strategies, Research, and Theory for College and University Teachers*. New York: Houghton-Mifflin Co., 1999 pp. 183-199; 302-311.

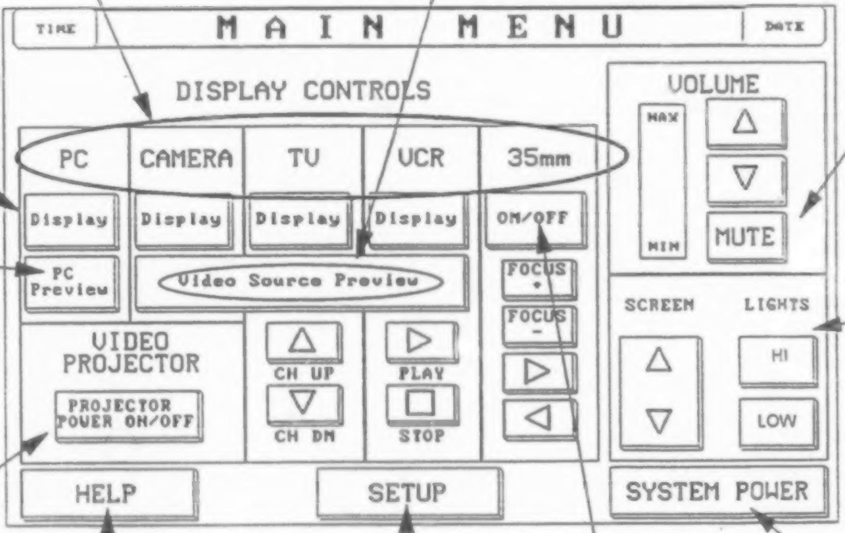
Main Menu

SOURCE BUTTONS Pressing a source button takes you to the source's submenu

Select **Video Source Preview** to view Camera, TV, or VCR image on computer monitor.
NOTE: this only works when the same source is selected as the DISPLAY source.

Select **DISPLAY** to show a source on the Video Projector

Select **PC Preview** to view PC image on computer monitor



MUTE: turns off audio until button is pressed again.

Light Presets:
High = Full
Low = Partial
for best image projection.

Save lamp life! Turn projector OFF when not in use.
NOTE: The video projector requires a cool-down period of about 3 minutes before you can restart it.

Access text-based help screens

Setup contains Tech Support Functions ONLY

Select 35mm slide projector ON/OFF button to view 35mm slides.
NOTE: If the video projector is on, selecting the 35mm ON/OFF button will automatically shut off the video projector.

Power on/off the equipment rack and console. Do not shut off system power.

Important Notes

- There are two simple "rules" for previewing images on the flat panel monitor:
  - You can always select PREVIEW for the PC, regardless of the DISPLAY source currently selected.
  - You can only select PREVIEW for a video source (Camera, TV, VCR) when the same source is also selected for DISPLAY.
- Once turned off, the video projector requires a cool-down period of about 3 minutes before you can restart it.
- Leave the equipment rack components and the PC on at all times
- *Please* SHUT off the video projector and Elmo Visual Presenter when not in use.

USAWC Classroom XXI Operating Instructions for Integrated Media System

Version 2.0

Prepared by
DCIM Operations
USAWC
Telephone 245-3707
e-mail: awcsi@carlisle-emh2.army.mil

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Main Menu

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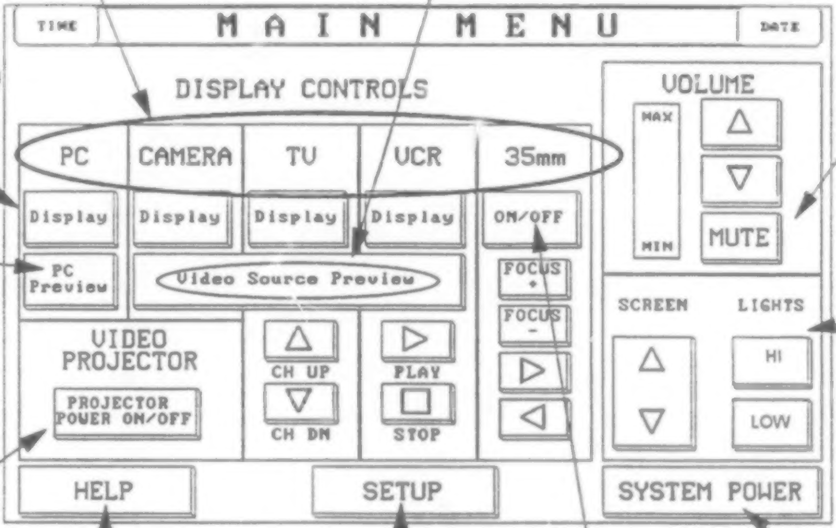

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Setup contains Tech Support Functions ONLY

Select 35mm slide projector ON/OFF button to view 35mm slides. NOTE: If the video projector is on, selecting the 35mm ON/OFF button will automatically shut off the video projector.

Power on/off the equipment rack and console. Do not shut off system power.

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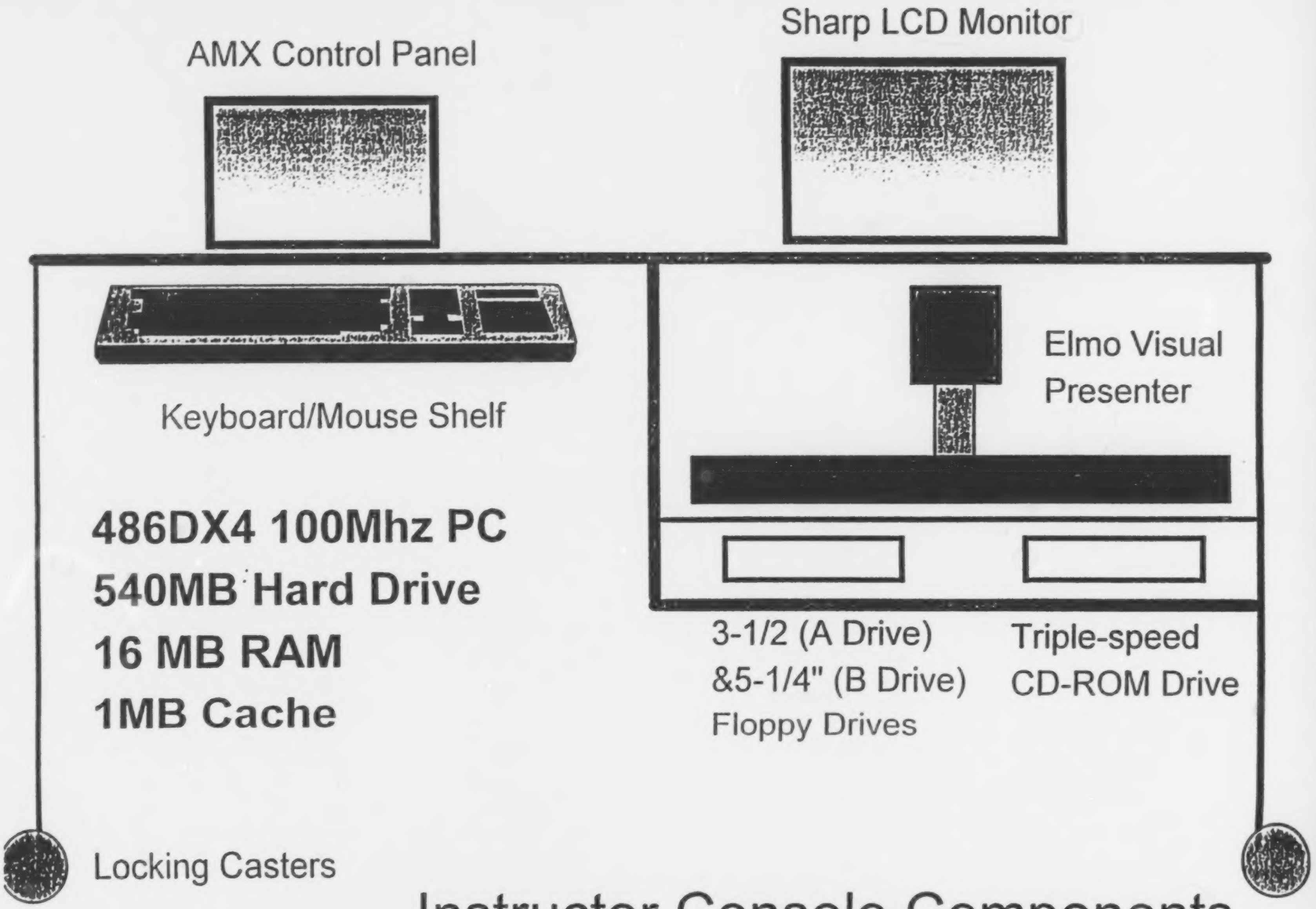
  - You can only select PREVIEW for a video source (Camera, TV, VCR) when the same source is also selected for DISPLAY.
- Once turned off, the video projector requires a cool-down period of about 3 minutes before you can restart it.
- Leave the equipment rack components and the PC on at all times
- *Please* shut off the video projector and Elmo Visual Presenter when not in use.

▪ Getting Help

5-3000

- For computer software and hardware problems, call the Automation Help Desk, x5-3102, room SB-15. Please provide help desk personnel with a description of the problem and the seminar or study room number.
- For problems with the Video Projector, VCR, TV Tuner, Elmo Visual Presenter, and conventional TV set, call the Visual Information Division, 5-3805, x5-3308, Bliss Hall Auditorium.
- If you are not sure what the problem is, call either organization and we will do our best to help you!



AMX Control Panel

Sharp LCD Monitor

Keyboard/Mouse Shelf

Elmo Visual
Presenter

486DX4 100Mhz PC
540MB Hard Drive
16 MB RAM
1MB Cache

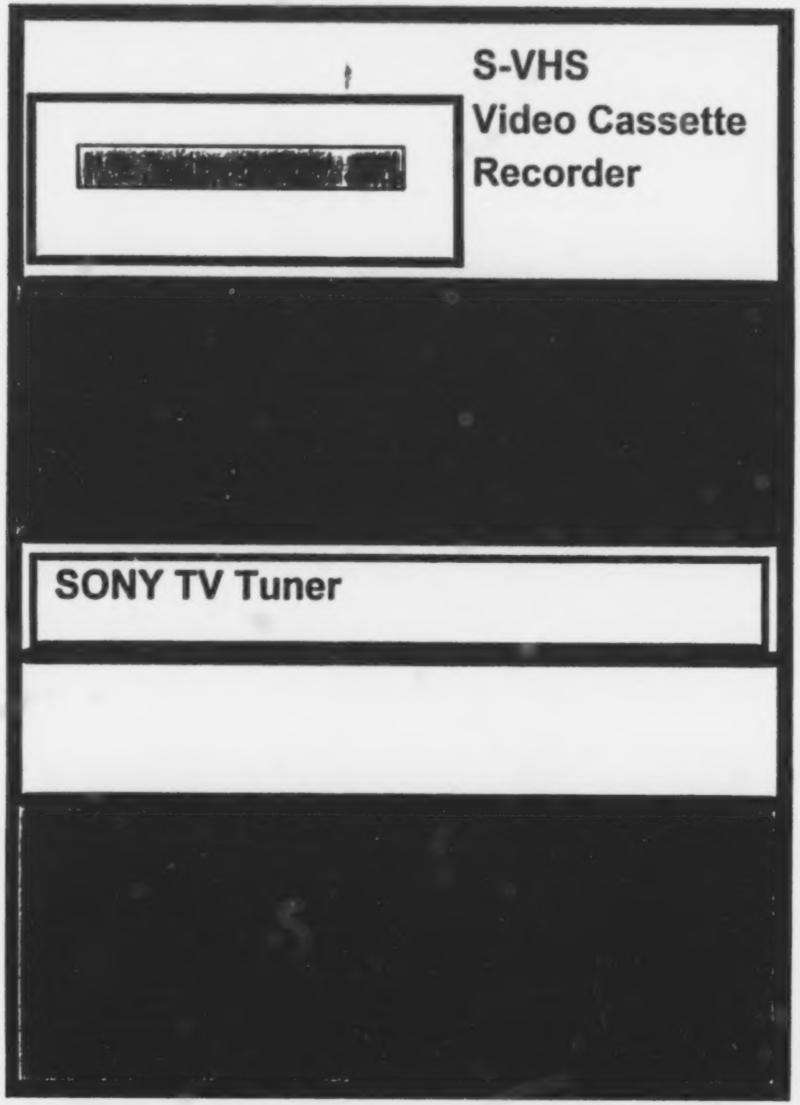
3-1/2 (A Drive)
&5-1/4" (B Drive)
Floppy Drives

Triple-speed
CD-ROM Drive

Locking Casters

Instructor Console Components

Equipment Rack Components



S-VHS
Video Cassette
Recorder

SONY TV Tuner

Other components:

- audio equalizer
- audio amplifier
- video scan doubler
- device controller

How to...

Turn the System On/Off.

Instructor Console and Equipment Rack. The **SYSTEM POWER** button on the AMX control panel Main Menu turns the power to the equipment rack and console on and off.

-- **DO NOT** use on/off switches on the power outlet strip located on the floor adjacent to or behind the equipment rack.

-- **DO NOT** use the on/off switch on the power strip mounted underneath the instructor console.

-- With exceptions noted below, the components of the system will last longer if you leave the system power **ON** at all times.

-- Turn **OFF** the Elmo Visual Presenter when not in use.

Video Projector. Use the **Video Projector Power On/Off** button on the AMX control panel to turn the projector on and off. Note: After turning the video projector off, you must wait approximately three minutes for the video projector to cool down before you can restart it.

-- Turn the video projector **OFF** when not needed.

Sharp LCD flat panel monitor. The on/off switch for the flat panel monitor is located on the top, right-hand side of the monitor.

-- Turn the flat panel monitor **OFF** before weekends and vacation periods.

How to...

Display computer applications.

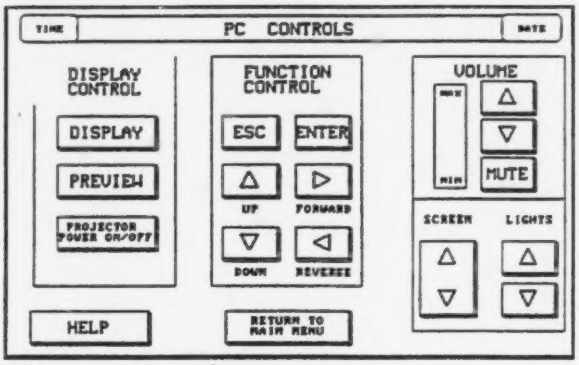
1. Ensure the equipment rack, console, and video projector are turned on. See **How to turn the System On/Off** for details.

2. On the Main Menu of the AMX touch-screen control panel, press the **DISPLAY** button for the **PC** source.

3. Press the **PC Preview** button to view the PC screen on the flat panel monitor.

NOTE: You can ALWAYS select **PC Preview** to view the PC screen on the flat panel monitor, regardless of the display source that is selected. The converse is not true -- that is, you cannot select the PC for DISPLAY and then select PREVIEW for any of the video sources (Camera, TV, or VCR).

4. You can use the PC controls submenu (accessed by pressing the **PC** source button on the main menu of the AMX touch screen control panel) to run presentations on the PC, or you can use the wireless remote for Freelance and other keystroke-compatible presentations.



PC source submenu.

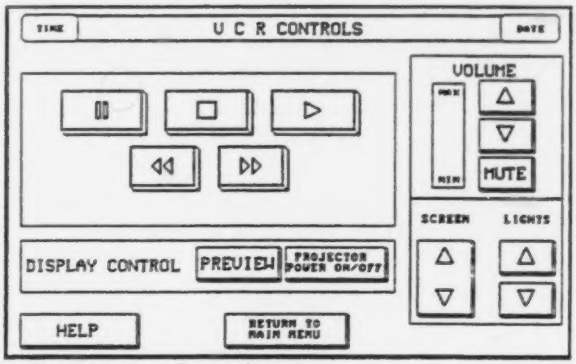
How to...

Display a VHS video cassette tape

1. Ensure the equipment rack, console, and projector are turned on. See **How to turn the System On/Off** for details.

2. Insert the VHS cassette in the Panasonic VCR (located on the top shelf of the equipment rack.

3. Select the **DISPLAY** button for the VCR source on the AMX control panel Main Menu.
4. Select the "play" button (designated with a single triangle pointing to the right) from either the Main Menu or on the VCR Controls submenu. To access the VCR submenu, simply press the **VCR** source button on the Main Menu.



VCR Control submenu.

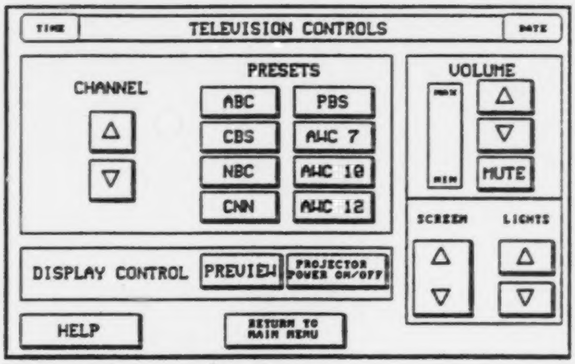
How to...

Display a Cable TV Channel

1. Ensure the equipment rack, video projector, and console are turned on. See **How to turn the System On/Off)** for details.

2. Select the **DISPLAY** button for the TV source on the AMX control panel Main Menu.

3. **To change cable TV channels.** Use the TV Channel selection buttons on either the AMX control panel Main Menu or the TV source submenu. The TV submenu contains buttons for preset channels.



TV source submenu.

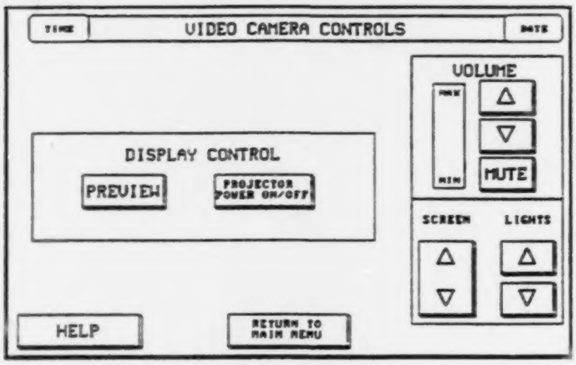
How to...

Display Hardcopy and 3D Objects with the Elmo Presenter

1. Ensure the equipment rack, console, Elmo Visual Presenter, and video projector are turned on. See **How to turn the System On/Off** for details.

2. Select the **DISPLAY** button for the CAMERA source on the AMX control panel's Main Menu.

3. Please refer to the following pages for details on setting up, stowing, and operating the Elmo Visual Presenter.



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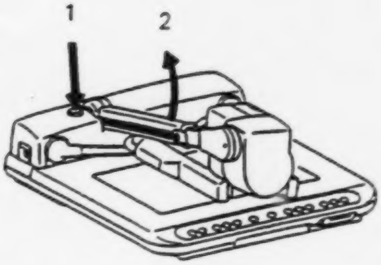
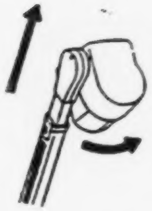
SETTING UP

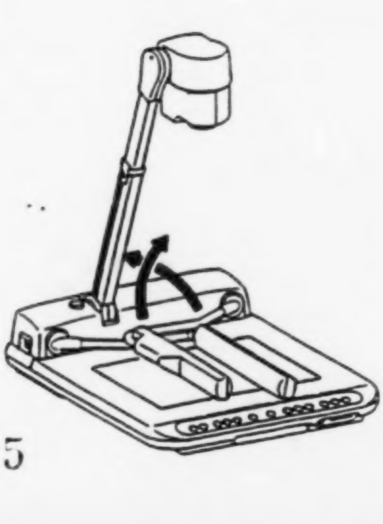
1. Press the lock release button [UNLOCK] and raise the column.
   Raise the column until the lock release button gets back to the original position.



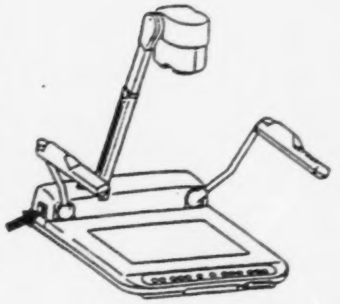
2. Extend the column until it is locked.
3. Adjust the camera head to the required position.



4. Set up the lighting unit to stop positions.
5. Connect the power cord to the AC outlet.

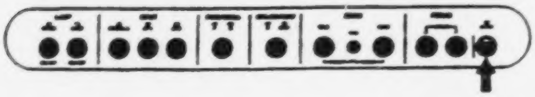


OPERATING PROCEDURES



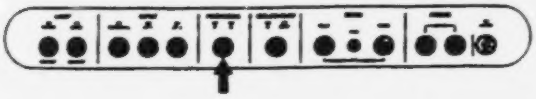
○**Simple steps for presenting printed materials**

1. Turn the power switch of the Visual presenter ON. (Connection to the monitor should be previously executed.)
   - ∗ Various functions of the Visual Presenter are initialized.
     The initial settings of those functions are displayed by their respective indicators.
2. Place the object on the stage.
   While observing the image on the TV monitor, adjust the zoom button to obtain the optimum size.
3. Press the auto focus button for focusing.
   - ∗ The covered area of the auto focus function is up to approx. 10 cm above the stage surface.



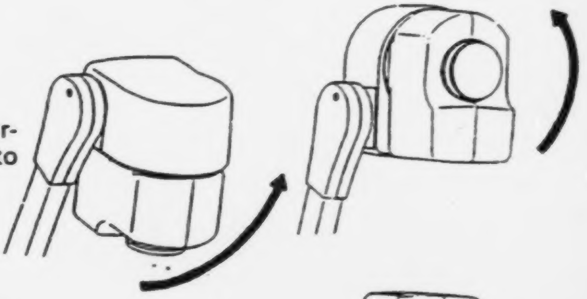
○**Simple steps for viewing transparencies as slide film**

1. Press the lighting button [BASE].
   The [BASE] indicator lights on, and then the built-in baselight are turned ON.
2. Press the nega/posi conversion button, and the indicator shows [N] (Negative) mode.
   - ∗ Nega/posi conversion is not possible with RGB output.
3. When turning off the baselight, press the lighting button [BASE].



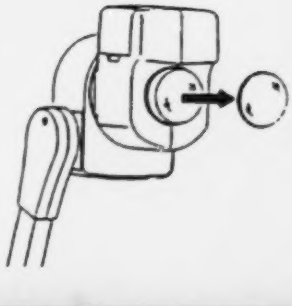
○**For shooting the mouth towards yourself**

Turn the camera head towards yourself. Turn over the lens part to obtain the proper image.



○**For use as a conventional video camera**

1. Remove the close-up lens when shooting the object at telephoto position.
2. Turn the camera head to horizontal position.
   This allows you to capture pictures on the wall, etc.



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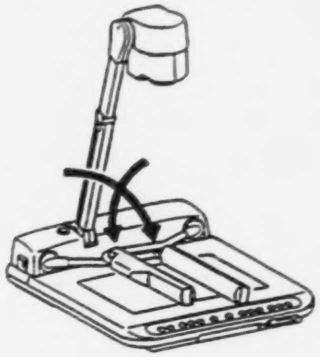
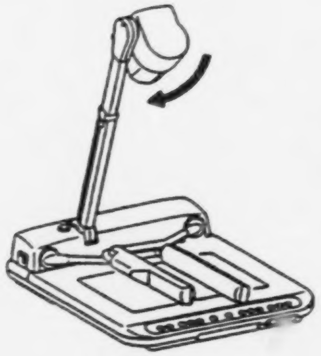
STOWING

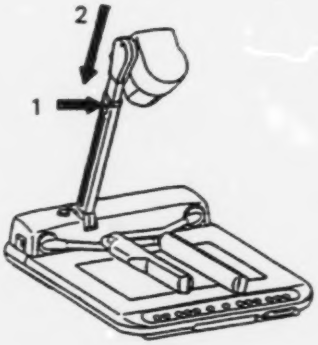
1. Turn the power switch OFF before disconnecting the power cord and the video cable.
   Note: Be sure to hold the cable firmly when disconnecting. Do not pull the cord out carelessly.
2. Fold down the lighting unit arms.
   Note: The arm, which is first folded down, should be turned and then the other as per the illustration so that two arms are closely located to the stage.



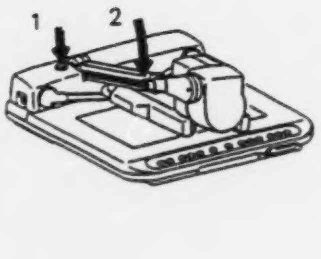
3. Turn the camera head to the illustrated position.
   Note: Stowing the camera head as per the illustration, or the stage surface or the lens may be damaged.



4. Pressing the column lock button, fully shorten the sub column.



5. Pressing the lock release button [UNLOCK], fold down the main column.
   Note: The illustration shows the fixed folded-down position for the column.
   Do not further press the column with excessive strength.



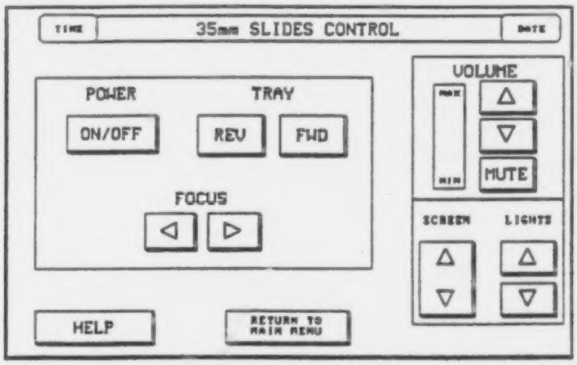
How to...

Display 35mm Slides

1. Ensure the equipment rack, 35mm slide projector, and video projector are turned on. See **How to turn the System On/Off** for details. The on/off button for the slide projector is on the Main Menu of the AMX control panel.

Note: When the 35mm slide projector is turned on using the AMX control panel, the video projector automatically shuts off. Restarting the video projector will require a three minute wait due to the projector's cool down cycle.

2. Use the forward and reverse buttons on either the Main Menu or the 35mm source submenu to advance or go backwards in a slide show. You can access the submenu by pressing the **35mm** source button on the Main Menu.



Basic troubleshooting

Sharp LCD Projector does not display selected source.

1. Turn on video projector. Use video projector On/Off button on Main Menu of AMX control panel.
2. Ensure correct DISPLAY button on AMX control panel is active (e.g., highlighted) for the desired source.

VCR tape doesn't display

1. Turn on equipment rack and console. Use SYSTEM POWER switch on Main Menu of AMX control panel.
2. Turn on VCR.
3. Turn on video projector.
4. Ensure DISPLAY button on AMX control panel is active for VCR source.

Cable TV doesn't display

1. Turn on equipment rack. Use SYSTEM POWER switch on Main Menu of AMX control panel.
2. Turn on Sony TV Tuner.
4. Ensure DISPLAY button on AMX control panel is active for **TV** source.
3. Ensure correct channel is selected. Check channel selection on TV source submenu of AMX control panel.
4. Turn on video projector. Use **Video Projector On/Off** button on Main Menu of AMX control panel.

Elmo Visual Presenter doesn't display

1. Turn on equipment rack. Use SYSTEM POWER switch on Main Menu of AMX control panel.
2. Turn on Elmo Visual Presenter.
3. Turn on video projector. Use **Video projector On/Off** button on Main Menu of AMX control panel.
4. Ensure DISPLAY button on AMX control panel is active for **Camera** source.

Computer doesn't display

1. Turn on equipment rack and console. Use SYSTEM POWER switch on Main Menu of AMX control panel.
2. Ensure computer is on.
3. Turn on video projector. Use **Video Projector On/Off** button on Main Menu of AMX control panel.

Basic troubleshooting (Continued)

35mm Projector

1. Fan and Lamp Off - Turn on power switch.
2. Fan on, lamp not lit. Ensure power switch is fully forward.
3. Turn on equipment rack, console, and projector. Use SYSTEM POWER switch on Main Menu of AMX control panel. Select **on/off** button for 35mm source.

Overhead Transparency Projector

1. Fan and Lamp Off - Turn on power switch.
2. Fan on, lamp not lit - Turn off projector. Slide Bulb change-over lever. Turn on projector. Please notify VI division if bulb burns out.

Computer software and hardware problems - Call Computer Help Desk, ~~5-3102~~ 5-3000, room SB15. Please describe problem and provide room number.

Problems with Sharp LCD video projector, VCR, TV tuner, Elmo presenter, scan doubler, TV set, 35mm slide projector - call Visual Information Division, 5-3085 or 5-3308. Please describe problem and provide room number.

Chapter Nine

Summing Up

This book claims the USAWC engages in learner-centered, inquiry-driven educational practice that takes into account differences in learners' backgrounds, learning styles and interests. Our practice is driven by question-asking and answer-seeking (both students and faculty), where the process of writing (that is, making a reasoned argument respecting an idea) is central to learning. The challenge we face is trying to bring those complicated and messy notions and practices together, forming a coherent set of practices for classroom instructors. Essentially there are three lessons:

- Diversity is a normal human condition and must be factored into the educational process.
- Teachers should not consider themselves to be *oracles and sages*, but individuals skilled at drawing out students' experiential or formal knowledge useful to accomplishing particular educational objectives.
- Students should be given some latitude to decide what their overall learning objectives should be, how particular coursework informs achieving those learning objectives, and where their program of study should take them.

Diversity as the Normal Human Condition

Ward Goodenough, an anthropologist of long and distinguished practice, wrote what may seem at first to be the most self-evident of claims: diversity is the normal human condition. Of course it is, most of us would likely say. Where is the profundity in that? The observation's power lies in its contradiction with our lived experience.

If diversity is "normal", why are we so uncomfortable with it? Our intellectual experience (formal knowledge) tells us that everyone is different from everyone else. But for many of us, our lived experience (experiential knowledge) of dealing with those who hold views different from ours can be very discomfiting. Difference is "abnormal" because it makes us uncomfortable. The power of Goodenough's observation is its internal inconsistency with our lived experience. The opportunity for learning is embedded in this discontinuity.

In "difference", our natural (or learned) reaction is to fall back into roles and practices most familiar to us. This applies to the new role as instructor are well as to our encounters with students who are likely to know more about any particular topic than we do. Faculty instructors at the USAWC differ from their counterparts in other Army schools. Our emphasis here is education (as distinct from training and instruction); our roles are those of mentor, guide and facilitator.

Mentors are in many ways role models. We should model the behaviors, practices and attitudes consistent with work in a strategic-level environment populated with critical thinkers.

Guides seek to point learners in useful directions—not necessarily toward the "right" answer. In guiding learners, we encourage them to examine views different from those they already hold—or from those we hold.

Facilitators of graduate and adult learning do what is best to make a learner's path of inquiry smooth and free of unnecessary obstacles. To this end, assignments (written and oral)

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ought to be designed to enhance learning not merely to check a box on some set of requirements.

Diversity, among teachers and students, across seminars groups, and between course objectives is the normal human condition at the USAWC (and in most other educational institutions). Leveraging that diversity should be our objective.

Teachers, not oracles and sages

Faculty instructors at the USAWC are often referred to as "facilitators". That term is defined above, and has little to do with instructional practices. Rather it has to do with *an orientation to* various instructional practices. Sometimes learning objectives require information to be given to students (via lectures or readings). It is hard to facilitate a lecture. It is easier to structure a lecture so that it is *facilitative*, that is, so it leads the learner toward an understanding of the concept without requiring him or her to "guess what the teacher's thinking". Teachers as facilitators are teachers who facilitate learning employing a variety of methods consistent with a lesson's learning expectations and students' learning styles.

To this end, an understanding of learning preferences (ours and our students') is helpful. Linking this understanding to the Myers-Briggs Type Indicator markers widely used at the USAWC seems a good idea, providing a more comprehensive understanding of individuals' orientations to the world, themselves and others.

Likewise, teachers need to be comfortable not knowing all the answers. If we knew all the answers we couldn't be very good role models for learners in this environment where answers are to be sought out. Capitalizing on the collective experience of the group should be foremost in our minds when thinking about how we teach at the USAWC.

Again this tacks back to the notion of prior and in-process experiences as catalysts for learning, and the intersection and potential discontinuity each may create in reflective practice. Brookfield's reading in this chapter encourages us to "hunt assumptions" informing our work as teachers. Teaching is not an innocent process, most times, as we (like our students) are driven by our own biases and passions. Identifying (and identifying with) our assumptions is the required first step toward effective instruction. Second, once assumptions are identified, *critical* reflection is required. (Note we refer to critical *thinking* and to critical *reflection* in the USAWC environment.) By this we mean trying to understand how power informs processes, and how assumptions drive actions.

This imperative applies both to faculty and to students.

Latitude in deciding long-term learning objectives and coursework informs achieving them

Wilkinson and Dubrow, in *Education for Judgement*, contend that "only when students stop deferring to others' opinions can they learn to identify and assess problems, form reasonable and defensible interpretations, and reach and test conclusions unaided". This is difficult in this environment. Authority of knowledge is imbedded in the military culture. Deference is normal. Now we are asking those raised up and clearly successful in this system to adopt behaviors that have, for most, not been marks of their previous successes. This applies to faculty as well as to students.

How do we change these now-inappropriate behaviors (because attitudes are harder to change and take more time)? First, faculty must resist behaving that way. The civilian dress generally worn by all faculty (uniformed and civilian) is an outward and visible sign of this imperative. Second, acknowledge that education is a process not an outcome. To this end, the ILP is an evolutionary document that should be expected to change. Third, remember that well-intentioned assignments designed last spring may not be the best ones to reinforce learning objectives as the course progresses. If an assignment needs adjusting, based on what we have come to learn about our particular set of students, then adjust it.

Remember: a teacher's ultimate objective is to aid students in achieving the learning objectives, the most important of which may be to develop the skill to access and evaluate materials on their own. This requires the teacher to let go of the learner not to control him/her.

It can be a very scary thing, but it can bring great personal and professional rewards.

Readings

Brookfield, Stephen D. *Becoming a Critically Reflective Teacher.* San Francisco: Jossey-Bass, 1995 (following pages)

Christensen, C. Roland, et al. *Education for Judgement: The Artistry of Discussion Leadership.* Cambridge, MA: Harvard Business School Press, 1991, pp. 249-261.

Becoming a Critically Reflective Teacher

Stephen D. Brookfield

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Jossey-Bass Publishers • San Francisco

Chapter One

What It Means to Be a Critically Reflective Teacher

We teach to change the world. The hope that undergirds our efforts to help students learn is that doing this will help them act toward each other, and toward their environment, with compassion, understanding, and fairness. But our attempts to increase the amount of love and justice in the world are never simple, never unambiguous. What we think are democratic, respectful ways of treating people can be experienced by them as oppressive and constraining. One of the hardest things teachers have to learn is that the sincerity of their intentions does not guarantee the purity of their practice. The cultural, psychological, and political complexities of learning and the ways in which power complicates all human relationships (including those between students and teachers) mean that teaching can never be innocent.

Teaching innocently means thinking that we're always understanding exactly what it is that we're doing and what effect we're having. Teaching innocently means assuming that the meanings and significance we place on our actions are the ones that students take from them. At best, teaching this way is naive. At worst, it induces pessimism, guilt, and lethargy. Since we never have full awareness of our motives and intentions, and since we frequently misread how others perceive our actions, an uncritical stance toward our practice sets us up for a lifetime of frustration. Nothing seems to work out as it should. Our continuing inability to control what looks like chaos becomes, to our eyes, evidence of our incompetence.

The need to break this vicious circle of innocence and blame is one reason why the habit of critical reflection is crucial for teachers' survival. Without a critically reflective stance toward what we do, we tend to accept the blame for problems that are not of our own making. We think that all resistance to learning displayed by students is caused by our own insensitivity or unpreparedness. We read poor evaluations of our teaching (often written by only a small minority of our students) and immediately conclude that we're hopeless failures. We become depressed when ways of behaving toward students and colleagues that we think are democratic and respectful are interpreted as aloof or manipulative. A critically reflective stance toward our teaching helps us avoid these traps of demoralization and self-laceration. It might not win us easy promotion or bring us lots of friends, but it does enormously increase the chance that we will survive in the classroom with enough energy and sense of purpose to have some real effect on those we teach.

Reflection as Hunting Assumptions

Critical reflection is one particular aspect of the larger process of reflection. To understand critical reflection properly, we need first to know something about the reflective process in general. As Figure 2.1 in Chapter Two shows, the most distinctive feature of the reflective process is its focus on hunting assumptions.

Assumptions are the taken-for-granted beliefs about the world and our place within it that seem so obvious to us as not to need stating explicitly. In many ways, we *are* our assumptions. Assumptions give meaning and purpose to who we are and what we do. Becoming aware of the implicit assumptions that frame how we think and act is one of the most challenging intellectual puzzles we face in our lives. It is also something we instinctively resist, for fear of what we might discover. Who wants to clarify and question assumptions she or he has lived by for a substantial period of time, only to find that they don't make sense? What makes the process of assumption hunting particularly complicated is that assumptions are not all of the same character. I find it useful to distinguish between three broad categories of assumptions—paradigmatic, prescriptive, and causal.

Paradigmatic assumptions are the hardest of the three kinds to uncover. They are the basic structuring axioms we use to order the world into fundamental categories. We may not recognize them as assumptions, even after they've been pointed out to us. Instead, we insist that they're objectively valid renderings of reality, the facts we know to be true. Some paradigmatic assumptions I have held at different stages of my life as a teacher are that adults are self-directed learners, that critical thinking is an intellectual function characteristic of adult life, that good adult educational processes are inherently democratic, and that education always has a political dimension. Paradigmatic assumptions are examined critically only after a great deal of resistance to doing so, and it takes a considerable amount of contrary evidence and disconfirming experiences to change them. But when they are challenged and changed, the consequences for our lives are explosive.

Prescriptive assumptions are assumptions about what we think ought to be happening in a particular situation. They are the assumptions that surface as we examine how we think teachers should behave, what good educational processes should look like, and what obligations students and teachers owe to each other. Inevitably, they are grounded in, and extensions of, our paradigmatic assumptions. For example, if you take it for granted that adults are self-directed learners, then you assume that the best teaching is that which encourages students to take control over designing, conducting, and evaluating their own learning.

Causal assumptions help us understand how different parts of the world work and the conditions under which processes can be changed. They are usually stated in predictive terms. An example of a causal assumption is that if we use learning contracts, this will increase students' self-directedness. Another is that if we make mistakes in front of students, this creates a trustful environment for learning, in which students feel free to make errors with no fear of censure or embarrassment. Of all the assumptions we hold, causal ones are the easiest to uncover. Most of the reflective exercises described in this book will, if they work well, clarify teachers' causal assumptions. But discovering and investigating these is only the start of the reflective process. We must then try to find a way to work back to the more deeply embedded prescriptive and paradigmatic assumptions we hold.

Hunting Assumptions: Some Examples

One way to demonstrate the benefits of the reflective habit is to point out what happens when it is absent. Without this habit, we run the continual risk of making poor decisions and bad judgments. We take action on the basis of assumptions that are unexamined and we believe unquestioningly that others are reading into our actions the meanings that we intend. We fall into the habits of justifying what we do by reference to unchecked "common sense" and of thinking that the unconfirmed evidence of our own eyes is always accurate and valid. "Of course we know what's going on in our classrooms," we say to ourselves. "After all, we've been doing this for years, haven't we?" Yet unexamined common sense is a notoriously unreliable guide to action.

Consider the following examples of how commonsense assumptions inform action. All these assumptions and actions are probably familiar to readers, particularly those who see themselves as progressive. After each example of a commonsense assumption, I give a plausible alternative interpretation that calls its validity into question.

It's common sense to visit small groups after you've set them a task, since this demonstrates your commitment to helping them learn. Visiting groups is an example of respectful, attentive, student-centered teaching.

Visiting small groups after you've set them a task can seem like a form of assessment—a way of checking up to see whether they're doing what you told them to do. This can be insulting to students, since it implies that you don't trust them enough to do what you've asked. Students might change their behavior during your visit to their group as a way of impressing you with the kinds of behaviors they think you want to see. Their overwhelming concern is showing you what good, efficient, task-oriented learners they are rather than thoughtfully analyzing and critiquing the task at hand.

It's common sense to cut lecturing down to a minimum, since lecturing induces passivity in students and kills critical thinking.

Before students can engage critically with ideas and actions, they may need a period of assimilation and grounding in a subject area or skill set. Lecturing may be a very effective way of ensuring this. Before students can be expected to think critically, they must see this process modeled in front of their eyes. A lecture in which a teacher questions her own assumptions, acknowledges ethical

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dilemmas hidden in her position, refers to inconvenient theories, facts, and philosophies that she has deliberately overlooked, and demonstrates an openness to alternative viewpoints encourages students to do likewise. Through lectures that stimulate critical analysis, a teacher sets a tone for learning. By first modeling the process herself, she earns the right to ask students to think critically.

It's common sense to use learning contracts because they are democratic, cooperative forms of assessment that give students a sense of control and independence.

Unless the ground for learning contracts has been well prepared and a detailed case for them has been built, students may interpret their use as evidence of a teacher's laziness or of a laissez-faire intellectual relativism. Students can make informed decisions about what they need to know, how they can know it, and how they can know that they know it only on the basis of as full as possible an understanding of the learning terrain they are being asked to explore. Learning contracts should therefore be used only when students know the grammar of the activity. They should understand its internal rules of inquiry, the analytical processes it requires, and the criteria used to judge meritorious achievement in the area. Only if they know these can they make good choices about what and how to learn.

It's common sense that students like group discussion because they feel involved and respected in such a setting. Discussion methods build on principles of participatory, active learning.

Democratic discourse—the ability to talk and listen respectfully to those who hold views different from our own—is a habit that is rarely learned or practiced in daily life. When discussion groups form, they reflect power dynamics and communicative inequities in the larger society. They also provide a showcase for egomaniacal grandstanding. Students will be highly skeptical of group discussion if the teacher has not earned the right to ask students to work this way by first modeling her own commitment to the process. One way to do this might be by holding several public discussions with colleagues early on in a course. In these discussions, teachers would model respectful disagreement and constructive criticism. Teachers would then work with students to create ground rules for democratic discourse that correct, as much as possible, for the inequities of race, class, and gender that are inevitably imported into the group from the wider society.

It's common sense that respectful, empathic teachers will downplay their position of presumed superiority and acknowledge their students as coteachers.

To students who have made great sacrifices to attend an educational activity, a teacher's attempts to deconstruct her authority through avowals of how she'll learn more from the students than they will from her rings of false modesty. Students know teachers have particular expertise, experience, skill, and knowledge. To pretend otherwise is to insult students' intelligence and to create a tone of mistrust from the outset. Students will feel happy with their role as coteachers only after the teacher's credibility has been established to their satisfaction and after they have learned what she stands for.

It's common sense that teaching is essentially mysterious, so if we try to dissect it or understand its essence, we will kill it.

Viewing teaching as a process of unfathomable mystery removes the necessity to think about what we do. Although a serious inquiry into practice may appear reductionistic and asinine, the teaching-as-mystery metaphor can be used as a convenient shield for incompetence. It excuses teachers from having to answer such basic questions as "How do you know when you are teaching well?" "How do you know your students are learning?" and "How could your practice be made more responsive?" To see teaching as mysterious works against the improvement of practice. If good and bad teaching are simply a matter of chance, then there is no point in trying to do better. The teaching-as-mystery idea also closes down the possibility of teachers sharing knowledge, insights, and informal theories of practice, since mystery is, by definition, incommunicable.

It's common sense that teachers who have been working the longest have the best instincts about what students want and what approaches work best. If my own instincts as a novice conflict with what experienced teachers tell me is true, I should put these instincts aside and defer to the wisdom of their experience.

Length of experience does not automatically confer insight and wisdom. Ten years of practice can be one year's worth of distorted experience repeated ten times. The "experienced" teacher may be caught within self-fulfilling interpretive frameworks that remain closed to any alternative perspectives. Experience that is not subject to critical analysis is an unreliable and sometimes dangerous source of advice. "Experienced" teachers can collude in promoting a form of groupthink about teaching that serves to distance them from students and to bolster their own sense of superiority.

The assumptions just outlined are, in certain situations, entirely valid. Their apparent clarity and truth explain why they are so widely accepted. But as we can see, there are quite plausible arguments to be made against each of them. Central to the reflective process is this attempt to see things from a variety of viewpoints. Reflective teachers seek to probe beneath the veneer of a commonsense reading of experience. They investigate the hidden dimensions of their practice and become aware of the omnipresence of power.

What Makes Reflection Critical?

One of the consequences of a concept's popularity is an increased malleability in its meaning. As interest in reflective practice has widened, so have the interpretations given to it. Smyth (1992) and Zeichner (1994) have both pointed out that the concept becomes meaningless if people use it to describe any teaching they happen to like. In Zeichner's words: "It has come to the point now where the whole range of beliefs about teaching, learning, schooling, and the social order have become incorporated into the discourse about reflective practice. Everyone, no matter what his or her ideological orientation, has jumped on the bandwagon at this point, and has committed his or her energies to furthering some version of reflective teaching practice" (1994, p. 9).

Reflection is not, by definition, critical. It is quite possible to teach reflectively while focusing solely on the nuts and bolts of classroom process. For example, we can reflect about the timing of coffee breaks, whether to use blackboards or flip charts, the advantages of using a liquid crystal display (LCD) panel over previously prepared overheads, or how rigidly we stick to a deadline for the submission of students' assignments. All these decisions rest on assumptions that can be identified and questioned, and all of them can be looked at from different perspectives. But these are not, in and of themselves, examples of *critical* reflection.

Just because reflection is not critical does not mean it is unimportant or unnecessary. We cannot get through the day without making numerous technical decisions concerning timing and process. These decisions are made rapidly and instinctively. They are also usually made without an awareness of how the apparently isolated and idiosyncratic world of the classroom embodies forces, contradictions, and structures of the wider society. Reflection on the timing of breaks would become critical only if the right of teachers and administrators to divide learning up into organizationally manageable periods of time was questioned. Critical reflection on the merits of blackboards, flip charts, or LCD panels would name and investigate educators' and students' unequal access to technology. Reflection about the deadlines for students' submission of papers that led to an investigation and questioning of the sources of authority underlying the establishment of criteria of evaluation would be reflection that was critical.

What is it, then, that makes this kind of reflection critical? Is it a deeper, more intense, and more probing form of reflection? Not necessarily. Critical reflection on experience certainly does tend to lead to the uncovering of paradigmatic, structuring assumptions. But the depth of a reflective effort does not, in and of itself, make it critical. To put it briefly, reflection becomes critical when it has two distinctive purposes. The first is to understand how considerations of power undergird, frame, and distort educational processes and interactions. The second is to question assumptions and practices that seem to make our teaching lives easier but actually work against our own best long-term interests.

Critical Reflection as the Illumination of Power

An awareness of how the dynamics of power permeate all educational processes helps us realize that forces present in the wider society always intrude into the classroom. Classrooms are not limpid, tranquil ponds, cut off from the river of social, cultural, and political life. They are contested spaces—whirlpools containing the contradictory crosscurrents of struggles for material superiority and ideological legitimacy that exist in the world outside. When we become aware of the pervasiveness of power, we start to notice the oppressive dimensions to practices that we had thought were neutral or even benevolent. We start to explore how power *over* learners can become power *with* learners (Kreisberg, 1992). Becoming alert to the oppressive dimensions of our practice (many of which reflect an unquestioned acceptance of values, norms, and practices defined for us by others) is often the first step in working more democratically and cooperatively with students and colleagues.

Let me give some examples of critical reflection focused on unearthing the ways in which the dynamics of power invade and distort educational processes.

The Circle

No practice is more beloved of progressive educators than that of having students sit in a circle rather than in rows. The circle is seen as a physical manifestation of democracy, a group of peers facing each other as respectful equals. Teachers like the circle because it draws students into conversation and gives everyone a chance to be seen and heard. Doing this respects and affirms the value of students' experiences. It places their voices front and center. In my own teaching, the circle has mostly been an unquestioned given.

However, as Gore (1993) points out, the experience of being in a circle is ambiguous. For students who are confident, loquacious, and used to academic culture, the circle holds relatively few terrors. It is an experience that is congenial, authentic, and liberating. But for students who are shy, self-conscious about their different skin color, physical appearance, or form of dress, unused to intellectual discourse, intimidated by disciplinary jargon and the culture of academe, or embarrassed by their lack of education, the circle can be a painful and humiliating experience. These students have been stripped of their right to privacy. They have also been denied the chance to check teachers out by watching them closely before deciding whether or not they can be trusted. Trusting teachers is often a necessary precondition for students' speaking out. This trust only comes with time, as teachers are seen to be consistent, honest, and fair. Yet the circle, with its implicit pressure to participate and perform, may deny the opportunity for this trust to develop.

So, beneath the circle's democratic veneer, there may exist a much more troubling and uncertain reality. Students in a circle may feel implicit or explicit pressure from peers and teachers to say something, anything, just to be noticed, particularly if part of their grade is awarded for participation. Whether or not they feel ready to speak or whether or not they have anything particular they want to say becomes irrelevant. The circle can be experienced as a mechanism for mandated disclosure, just as much as it can be a chance for people to speak in an authentic voice. This is not to suggest that we throw the circle out and go back to the dark days of teachers talking uninterruptedly at rows of desks. I continue to use the circle in my own practice. But critical reflection makes me aware of the circle's oppressive potential and reminds me that I must continually research how it is experienced by students.

Teachers at One with Students

Teachers committed to working democratically often declare their "at-one-ness" with students. Believing themselves and their students to be moral equals, they like to say to them, "I'm no different from you, so treat me as your equal. Act as if I wasn't a teacher, but a friend. The fact that there's a temporary imbalance between us in terms of how much I know about this subject is really an accident. We're colearners and coteachers, you and I." However, culturally learned habits of reliance on, or hostility toward, authority figures (especially those from the dominant culture) cannot so easily be broken.

Like it or not, in the strongly hierarchical culture of higher education, with its power imbalances and its clear demarcation of roles and boundaries, teachers cannot simply wish away students' perception of their superior status. No matter how much they might want it to be otherwise, and no matter how informal, friendly, and sincere toward students they might be in their declarations of "at-one-ness," teachers *are* viewed as different, at least initially. Critically aware teachers will reject as naive the assumption that by saying you're the students' friend and equal, you thereby become so. Instead, they will research how their actions are perceived by their students and will try to understand the meaning and symbolic significance students ascribe to the things teachers say and do. They will come to realize that any authentic collaboration can happen only after they have spent considerable time earning students' trust by acting democratically and respectfully toward them.

The Teacher as Fly on the Wall

Teachers committed to a vision of themselves as nondirective facilitators of learning, or as resource people present only to serve needs defined by students, often adopt the "fly on the wall" approach to teaching. They will put students into groups, give only minimal instructions about what should happen, and then retreat from the scene to let students work as they wish. However, this retreat is only partial. Teachers rarely leave the room for long periods of time. Instead, they sit at their desk, or off in a corner, observing groups get started on their projects.

For students to pretend that a teacher is not in the room is almost impossible. Knowing that a teacher is nearby will cause some students to perform as good, task-oriented members of the group. Others will just clam up for fear of saying or doing something stupid while a teacher is watching. Students will wonder how the teacher thinks they're doing and will be observing him or her closely for any clues to approval or censure. Students' awareness of the power relationship that exists between themselves and their teachers is such that it pervades nearly all interactions between them.

A teacher cannot be a fly on the wall if that means being an unobtrusive observer. If you say nothing, this will be interpreted either as a withholding of approval or as tacit agreement. Students will always be wondering what your opinion is about what they're doing. Better to give some brief indication of what's on your mind than to have students obsessed with whether your silence means disappointment or satisfaction with their efforts. Critically reflective teachers will make sure that they find some way of regularly seeing what they do through students' eyes. As a result of learning about the different ways in which students view the teacher's silence, they will be in a much better position to make sure that their fly-on-the-wall presence has the helpful consequences they seek. They will learn when and how much to disclose, and they will know about the confidence-inducing effects of such disclosure. They will also know when keeping their own counsel leads to students' doing some productive reflection, and when it paralyzes them.

Discussion as Spontaneous Combustion

Teachers who, like myself, use discussion extensively often have a particular image of an ideal discussion session. Usually, this is of a conversation in which the teacher says very little because students are talking so much. There is little silence in the room. What conversation there is focuses on relevant issues, and the level of discourse is suitably sophisticated. The Algonquin Roundtable, a Bloomsbury dinner party, a Woody Allen film script—these are the models for good conversation. Discussions in which teachers are mostly silent are often regarded as the best discussions of all. We walk away from animated conversations dominated by students' voices with a sense that our time has been well spent.

This sense may be justified. But other readings of these discussions are possible. It may well be that by standing back and not intervening in the conversation, we have allowed the reinforcement of differences of status existing in the wider society. As Doyle (1993) puts it, "The teacher closing a classroom door does not shut out the social, cultural, or historical realities of students" (p. 6). Students who see themselves as members of minority groups and whose past experiences have produced legitimate fears about how they will be treated in an academic culture may hold back. Out of a fear of being browbeaten by students of privilege, or from a desire not to look stupid, they may elect for silence (Fassinger, 1995). This silence will be broken only if a teacher intervenes to create a structured opportunity for all group members to say something. Also, students who are introverts, or those who need time for reflective analysis, may find the pace of conversation intimidating. In this instance, inequity caused by personality or learning style, rather than that caused by race, class, or gender, may be distorting what seems to be a conversation characterized by excitement and spontaneity.

A critically reflective teacher will be concerned to check whether or not her sense of pleasure in a discussion is matched by that of students. Such a teacher will find a way of conducting a regular emotional audit of how the conversation is experienced. On the basis of what she learns, she will be able to make a more informed decision about when her silence enhances students' sense of participating in a spontaneous experience. She will be better placed to know when to structure participation or when to call for silent reflective interludes.

The Mandated Confessional

Student journals, portfolios, and learning logs are all the rage among teachers who advocate experiential methods. Teachers believe that encouraging students to speak personally and directly about their experiences honors and encourages their authentic voices. That this often happens is undeniable. However, journals, portfolios, and logs also have the potential to become ritualistic and mandated confessionals (Usher and Edwards, 1995)—the educational equivalents of the tabloidlike, sensationalistic outpourings of talk show participants.

Students who sense that their teacher is a strong advocate of experiential methods may pick up the implicit message that good students reveal dramatic private episodes in their lives that lead to transformative insights. Students who don't have anything painful, traumatic, or exciting to confess may start to feel that their journal falls short. Not being able to produce revelations of sufficient intensity, they may decide to invent some, or they may start to paint quite ordinary experiences with a sheen of transformative significance. A lack of dramatic experiences or insights may be perceived by students as a sign of failure—an indication that their lives are somehow incomplete and lived at a level that is insufficiently self-aware or exciting.

A teacher committed to critical reflection will constantly inquire into how her students perceive her use of experiential methods such as journals, portfolios, and logs. She will get inside their heads to check whether her instructions are inadvertently encouraging them to produce certain kinds of revelations. If she discovers that this is the case, she will take steps to address the issue publicly. By adjusting the reward system, she will model a rejection of the belief that the more sensational the revelation, the better the grade.

Respect for Voice—"I Want to Hear Your Opinion, Not Mine"

Teachers committed to democratic classrooms often believe that speaking too much or expressing their own opinions will create in students' minds a stock of "acceptable" beliefs that parrot those held by the teacher. They believe that declaring their own biases and perspectives encourages students to gain teacher approval by uncritically regurgitating these rather than thinking issues through for themselves. So, when faced with students who ask the question, "What do you think?", teachers will sometimes reply along the following lines: "Well, it's not important what *I* think, but it is important that *you* think this through by yourself. So I'm not going to tell you what I think until you've had the chance to air your own ideas." Done well, as in the "dialogic lecture" (Shor, 1992b), this withholding of opinions can encourage students' independence of thought. Done unreflectively, however, this apparently emancipatory prompt to critical analysis can induce mistrust and shut down learning.

From a student's viewpoint, teachers who withhold expression of their own opinions may be perceived as untrustworthy. Given the power relationship that pertains in a college classroom, teachers who refuse to say what they think can be seen as engaged in a manipulative game, the purpose of which is to trick students into saying the wrong thing. Students know that the teacher has the right answer, but for some reason it is not being given to them. Instead, the teacher is seen to be holding back the information that would enable them to perform well. He is asking students to risk declaring their own thinking without making public what he believes.

A critically reflective teacher would know the power—both positive and negative—of his withholding of speech. By examining his students' experiences, he would learn how to time his interventions more skillfully. By asking students about their best and worst experiences as learners, he would probably learn the importance of first modeling any risk-taking that he intends to request of students.

Critical Reflection as the Recognition of Hegemonic Assumptions

The second purpose of critical reflection is to uncover hegemonic assumptions. Hegemonic assumptions are those that we think are in our own best interests but that have actually been designed by more powerful others to work against us in the long term. As proposed by Antonio Gramsci (1978), the term *hegemony* describes the process whereby ideas, structures, and actions come to be seen by the majority of people as wholly natural, preordained, and working for their own good, when in fact they are constructed and transmitted by powerful minority interests to protect the status quo that serves those interests. The subtle tenacity of hegemony lies in the fact that, over time, it becomes deeply embedded, part of the cultural air we breathe. We cannot peel back the layers of oppression and identify any particular group or groups of people actively conspiring to keep others silent and disenfranchised. Instead, the ideas and practices of hegemony are part and parcel of everyday life—the stock opinions, conventional wisdom, and commonsense ways of seeing and ordering the world that many of us take for granted. If there is a conspiracy here, it is the conspiracy of the normal.

Hegemonic assumptions about teaching are eagerly embraced by teachers. They seem to represent what's good and true and therefore to be in their own best interests. Yet these assumptions actually have the effect of serving the interests of groups that have little concern for teachers' mental or physical health. The dark irony and cruelty of hegemony is that teachers take pride in acting on the very assumptions that work to enslave them. In working diligently to implement these assumptions, teachers become willing prisoners who lock their own cell doors behind them.

Critically reflective teachers are alert to hegemonic assumptions. Ideas about "good teaching" that may seem obvious, even desirable, are revealed as harmful and constraining. These teachers are able to see the insanity of aspiring to ways of teaching that, in the end, seriously threaten their own well-being. Let me give some examples of the kind of hegemonic assumptions I am talking about.

Teaching as a Vocation

Teachers sometimes speak of their work as a vocation. Thought of this way, teaching is a calling distinguished by selfless service to students and educational institutions. That teachers sometimes eagerly accept concepts of vocation and conscientiousness to justify their taking on backbreaking loads is evident from Campbell and Neill's studies (1994a, 1994b) of teachers' work. A sense of calling becomes distorted to mean that teachers should deal with larger and larger numbers of students, regularly teach overload courses, serve on search, alumni, and library committees, generate external funding by winning grant monies, and make occasional forays into scholarly publishing. And they should do all of this without complaining, which is the same as "whining."

Teachers who take the idea of vocation as the organizing concept for their professional lives may start to think of any day on which they don't come home exhausted as a day wasted—or at least a day when they have not been "all that they can be." (It's interesting that so many teachers have adopted a slogan to describe their work that first appeared in commercials for army recruitment.) Diligent devotion to the college's many ends—some of which are bound to be contradictory—may come to be seen as the mark of a good teacher.

Thus what seems on the surface to be a politically neutral idea on which all could agree—that teaching is a vocation calling for dedication and hard work—may be interpreted by teachers as meaning that they should squeeze the work of two or three jobs into the space where one can sit comfortably. "Vocation" thus becomes a hegemonic concept—an idea that seems neutral, consensual, and obvious, and that teachers gladly embrace, but that ultimately works against their own best interests. The concept of vocation serves the interests of those who want to run colleges efficiently and profitably while spending the least amount of money and employing the smallest number of staff that they can get away with.

Critically reflective teachers can stand outside their practice and see what they do in a wider perspective. They know that curriculum content and evaluative procedures are social products located in time and space that reproduce the inequities and contradictions of the wider culture. They are able to distinguish between a justifiable and necessary dedication to students' well-being and a self-destructive workaholism. They have a well-grounded rationale for their practice, which they can call on to help them make difficult decisions in unpredictable situations.

This rationale—a set of critically examined core assumptions about why one does what one does in the way that one does it—is a survival necessity. It grounds teachers in a moral, intellectual, and political project and gives them an organizing vision of what they are trying to accomplish. By prioritizing what is really important in their work, a critical rationale helps teachers keep in check their own tendency to translate a sense of vocation into a willingness to do everything asked of them.

The "Perfect Ten" Syndrome

Many teachers take an understandable pride in their craft wisdom and knowledge. They want to be good at what they do, and consequently, they set great store by students' evaluations of their teaching. When these are less than perfect—as is almost inevitable—teachers assume the worst. All those evaluations that are complimentary are forgotten, while those that are negative assume disproportionate significance. Indeed, the inference is often made that bad evaluations must, by definition, be written by students with heightened powers of pedagogic discrimination. Conversely, good evaluations are thought to be produced by students who are half-asleep.

The constant inability to obtain uniformly good evaluations leads to feelings of incompetence and guilt. When we keep these evaluations to ourselves (as is typical, given the privatized culture of many college campuses), the sense of failure becomes almost intolerable. We're convinced that we're the only ones who receive bad evaluations, and that everyone else is universally loved. In this way, an admirable desire to do good work turns into a source of demoralization.

Critically reflective teachers recognize the error of assuming that good teaching is always signaled by the receipt of uniformly good student evaluations. They know that the complexities of learning and the presence among students of diverse personalities, cultural backgrounds, genders, ability levels, learning styles, ideological orientations, and previous experiences make a perfect ten impossible to achieve. Given the diversity of college classrooms (particularly those in urban areas), no actions a teacher takes can ever be experienced as universally and uniformly positive. The critically reflective know, too, that teacher assessment and performance appraisal mechanisms that reward perfect scores don't always serve students' interests. For one thing, good evaluations are sometimes the result of teachers' pandering to students' prejudices. Teachers are almost bound to be liked if they never challenge students' automatic ways of thinking and behaving, or if they allow them to work only within their preferred learning styles. Since letting people stick with what comes easily to them is a form of cognitive imprisonment, one could almost say that anyone who consistently scores a perfect ten is just as likely to be doing something wrong as something right.

So, whose interests does the "perfect ten" assumption serve, if not those of students and teachers? Primarily, it serves individuals with a reductionist cast of mind who believe that the dynamics and contradictions of teaching can be reduced to a linear, quantifiable rating system. Such epistemologically challenged people sometimes work their way into positions of administrative and legislative power. Believing that learning and teaching are unidimensional, they carve curricula into discrete units and create standardized objectives that are meant to be context- and culture-proof. In their minds, teaching becomes the simple implementation of centrally produced curricula and objectives. Good or bad teaching is then numerically measured by how well these are put into effect.

Judging teaching by how many people say they like what you do supports a divisive professional ethic that rewards those who are the most popular. The "perfect ten" syndrome makes life easier for those who have the responsibility of deciding which faculty members are to be promoted. All they need do is consult student ratings, since according to this logic, the best teachers are obviously those with the highest scores. This turns professional advancement into a contest in which the winners are those who get the most students to say they like them. Administrators who use this rating system are not vindictive or oppressive. They are tired and burned out from making an unworkable system appear to be working. So if they come across a neat solution (giving promotion to those with the highest scores on student evaluations) to a difficult problem (deciding who of their staff advances), we can hardly blame them for embracing it.

Deep Space Nine: The Answer Must Be Out There Somewhere

For many teachers, the first response to encountering a problem of practice is to look for a manual, workshop, or person that can solve it. Students refusing to learn? Buy a book on dealing with resistance to learning. Classes full of students with different back-

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grounds, expectations, ability levels, and experiences? Enroll in that summer institute on dealing with diversity. Running discussions that are dominated by a handful of confident, articulate students? Go and see how that colleague across campus that everyone raves about runs her discussions.

All these resources for dealing with problems are useful and necessary. I have written chapters that dealt with resistance to learning, run workshops on responding to diversity, and invited colleagues to watch me teach, so I don't want to minimize the importance of doing such things. I do want to point out, however, that while reading books, attending workshops, or watching colleagues can give you some useful insights and techniques that will help you in dealing with your problem, it is wrong to assume that at some point in these activities, you will inevitably stumble on the exact answer to the problem you are experiencing.

To think this way is to fall victim to a fundamental epistemological distortion. This distortion holds that someone, or something, out there has the knowledge that constitutes the answer to our problems. We think that if we just look long and hard enough, we will find the manual, workshop, theory, or person that will tell us exactly what we need to do. Occasionally, this might happen. But more often than not, any ideas or suggestions we pick up will have to be sculpted to fit the local conditions in which we work. And that goes for all the suggestions I make in this book on how to become critically reflective.

Unless we challenge this epistemological distortion, we risk spending a great deal of energy castigating ourselves for our inability to make externally prescribed solutions fit the problems we're facing. It never occurs to us that what needs questioning is the assumption that neat answers to our problems are always waiting to be discovered outside our experience. It can take many demoralizing disappointments and misfirings—applications of standardized rules that vary wildly in their success—before we realize the fruitlessness of the quest for standardized certainty.

Critically reflective teachers have researched their teaching and their students enough to know that methods and practices imported from outside rarely fit snugly into the contours of their classrooms. They are aware that difficult problems never have standardized solutions. At best, such problems call forth a multiplicity of partial responses. The critically reflective also know that a significant but neglected starting point for dealing with these problems is the critical analysis of their own past experience. Taken at face value, autobiographical stories are suspect and subject to the dangers of distortion and overgeneralization. But when critically analyzed and combined with other sources of reflection such as colleagues' experiences, students' perceptions, and formal theory, autobiographies can be a powerful source of insight into the resolution of problems.

The idea that our complex questions of practice always have simple answers designed by others serves the interests of those who accrue power, prestige, and financial reward from designing and producing these answers. Consultants, authors, and production companies rarely say of their products, "These might be useful, but only if you research your local conditions and adapt what is here to your own circumstances." Neither do they advocate a mixing and matching of their products with elements from others marketed by their rivals. To say this would negate the chief appeal of these products, which is their promise that they will take care of our problems for us. We are thus relieved of the tiresome responsibility of having to analyze our own experiences critically or to research the contexts of our practice. However comfortable this may feel, it is ultimately damaging to our sense of ourselves as purposeful agents.

We Meet Everyone's Needs

The "meeting needs" rationale is alive and well in higher education. For example, when asked to explain why they've made a particular decision, administrators will often justify what they've done by saying that they're meeting the community's, the faculty's, or the students' needs. Likewise, teachers will say that the best classes are those in which every student feels that his or her needs have been met. The assumption that good teachers meet all students' needs all the time is guaranteed to leave us feeling incompetent and demoralized.

The trouble with the "meeting needs" rationale is not just that it sets up an unattainable standard, but that students sometimes take a dangerously narrow view of their needs. Students who define their need as never straying beyond comfortable ways of thinking, acting, and learning are not always in the best position to judge what is in their own best interests. I don't believe that teachers can force people to learn, but I do believe that they can lay out for students the consequences (especially the negative consequences) of their holding on to their own definitions of need. They can also suggest alternative, broadening definitions.

Critically reflective teachers know that while meeting everyone's needs sounds compassionate and student-centered, it is pedagogically unsound and psychologically demoralizing. They know that clinging to this assumption will only cause them to carry around a permanent burden of guilt at their inability to live up to this impossible task. They are aware that what seems to be an admirable guiding rule—and one that they are tempted to embrace—will end up destroying them.

The "meeting needs" assumption serves the interests of those who believe that education can be understood and practiced as a capitalist economic system. Higher education is viewed as a marketplace in which different businesses (colleges) compete for a limited number of consumers. Those who survive because they have enough consumers must, by definition, be doing a good job. State colleges need to attract and graduate large numbers of students if they are to continue to be funded. Private colleges depend on tuition revenue to survive. Under such circumstances, keeping the consumers (students) happy enough so that they don't buy the product (education) elsewhere is the bottom line for institutional success.

When education is viewed this way, we devote a lot of energy to keeping the customer satisfied. We definitely don't want him to feel confused or angry because we have asked him to do something he finds difficult and would rather avoid. The problem with this way of thinking about education is that it ignores pedagogic reality. Significant learning and critical thinking inevitably induce an ambivalent mix of feelings and emotions, in which anger and confusion are as prominent as pleasure and clarity. The most hallowed rule of business—that the customer is always right—is often pedagogically wrong. Equating good teaching with a widespread feeling among students that you have done what they wanted ignores the dynamics of teaching and prevents significant learning.

Why Is Critical Reflection Important?

Given that critical reflection entails all kinds of risks and complexities, there have to be some compelling reasons why anyone would choose to begin the critical journey. Few of us are likely to initiate a project that promises enlightenment only at the cost of torture. The choice to become critically reflective will be made only if we see clearly that it is in our own best interests. Otherwise, given the already overcrowded nature of our lives, why should we bother to take this activity seriously? I believe there are six reasons why learning critical reflection is important.

It Helps Us Take Informed Actions

Simple utilitarianism dictates that critical reflection is an important habit for teachers to develop. As is evident from the examples scattered throughout this chapter, becoming critically reflective increases the probability that we will take informed actions. Informed actions are those that can be explained and justified to ourselves and others. If a student or colleague asks us why we're doing something, we can show how our action springs from certain assumptions we hold about teaching and learning. We can then make a convincing case for their accuracy by laying out the evidence—experiential as well as theoretical—that undergirds them.

An informed action is one that has a good chance of achieving the consequences intended. It is an action that is taken against a backdrop of inquiry into how people perceive what we say and do. When we behave in certain ways, we expect our students and colleagues to see in our behaviors a certain set of meanings. Frequently, however, our words and actions are given meanings that are very different from, and sometimes directly antithetical to, those we intended. When we have seen our practice through others' eyes, we're in a much better position to speak and behave in ways that ensure a consistency of understanding between us, our students, and our colleagues. This consistency increases the likelihood that our actions have the effects we want.

It Helps Us Develop a Rationale for Practice

The critically reflective habit confers a deeper benefit than that of procedural utility. It embeds not only our actions but also our sense of who we are as teachers in an examined reality. We know why we believe what we believe. A critically reflective teacher is much better placed to communicate to colleagues and students—as well as to herself—the rationale behind her practice. She works from a position of informed commitment. She knows why she does what she does, why she thinks what she thinks. Knowing this, she communicates to students a confidence-inducing sense of being grounded. This sense of groundedness stabilizes her when she feels swept along by forces she cannot control.

A critical rationale grounds our most difficult decisions in core beliefs, values, and assumptions. As I found out when interviewing students for *The Skillful Teacher* (1990b), a teacher's ability to make clear what it is that she stands for, and why she believes this is important, is a crucial factor in establishing her credibility with students. Even students who disagree fundamentally with a teacher's rationale gain confidence from knowing what it is. In this instance, knowledge really is power. According to students, the worst position to be in is to sense that a teacher has an agenda and a preferred way of working, but not to know exactly what these are. Without this information, they complain, how can they trust the teacher or know what they're dealing with?

A critical rationale for practice is a psychological, professional, and political necessity. Without it, we are tossed about by whatever political or pedagogical winds are blowing at the time. A rationale serves as a methodological and ethical touchstone. It provides a foundational reference point—a set of continually tested beliefs that we can consult as a guide to how we should act in unpredictable situations. But a critical rationale for practice is not a static, immutable construct. It is shaped in a particular context and needs to keep adapting to circumstances. Although our foundational beliefs (such as a commitment to democratic process or a belief in critical thinking) can remain essentially unchanged, we keep learning different ways to realize them in our work.

It Helps Us Avoid Self-Laceration

If we are critically reflective, we are also less prone to self-laceration. A tendency of teachers who take their work seriously is to blame themselves if students are not learning. These teachers feel that at some level, they are the cause of the hostility, resentment, or indifference that even the best and most energetic of them are bound to encounter from time to time. Believing themselves to be the cause of these emotions and feelings, they automatically infer that they are also their solution. They take on themselves the responsibility for turning hostile, bored, or puzzled students into galvanized advocates for their subjects, brimming over with the joys of learning. When this doesn't happen (as is almost always the case), such teachers allow themselves to become consumed with guilt for what they believe is their pedagogic incompetence.

Critically reflective teachers who systematically investigate how their students are experiencing learning know that much student resistance is socially and politically sculpted. Realizing that resistance to learning often has nothing to do with what they've done as teachers helps them make a healthier, more realistic appraisal of their own role in, or responsibility for, creating resistance. They learn to stop blaming themselves and they develop a more accurate understanding of the cultural and political limits to their ability to convert resistance into enthusiasm.

It Grounds Us Emotionally

Critical reflection also grounds us emotionally. When we neglect to clarify and question our assumptions, and when we fail to investigate our students, we have the sense that the world is governed by chaos. Whether or not we do well seems to be largely a matter of luck. Lacking a reflective orientation, we place an unseemly amount of trust in the role of chance. We inhabit what Freire (1993) calls a condition of "magical consciousness." Fate or serendipity, rather than human agency, is seen as shaping educational process. The world is experienced as arbitrary, as governed by a whimsical God.

When we think this way, we are powerless to control the ebbs and flows of our emotions. One day, a small success inflates our self-confidence out of all proportion. The next, an equally small failure (such as one bad evaluative comment out of twenty good ones) is taken as a devastating indictment of our inadequacy. Teachers caught on this emotional roller coaster, where every action either confirms their brilliance or underscores their failure, cannot survive intact for long. Either they withdraw from the classroom or they are forced to suppress (at their eventual peril) the emotional con-

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tent of their daily experiences. The critically reflective habit is therefore connected to teachers' morale in powerful ways.

It Enlivens Our Classrooms

It is important to realize the implications for our students of our own critical reflection. Students set great store by our actions, and they learn much from observing how we model intellectual inquiry and democratic process. A critically reflective teacher therefore activates her classroom by providing a model of passionate skepticism. As Osterman (1990) comments, "Critically reflective teachers—teachers who make their own thinking public, and therefore subject to discussion—are more likely to have classes that are challenging, interesting, and stimulating for students" (p. 139).

We know that students watch us closely and that they are quick to notice and condemn any inconsistency between what we say we believe and what we actually do. They tell us that seeing a teacher model critical thinking in front of them is enormously helpful to their own efforts to think critically. By openly questioning our own ideas and assumptions—even as we explain why we believe in them so passionately—we create an emotional climate in which accepting change and risking failure are valued. By inviting students to critique our efforts—and by showing them that we appreciate these critiques and treat them with the utmost seriousness—we deconstruct traditional power dynamics and relationships that stultify critical inquiry. A teacher who models critical inquiry in her own practice is one of the most powerful catalysts for critical thinking in her students. For this reason, if for no other, critical reflection should become perhaps the most important indicator we look for in any attempt to judge teachers' effectiveness.

It Increases Democratic Trust

What we do as teachers makes a difference in the world. In our classrooms, students learn democratic or manipulative behavior. They learn whether independence of thought is really valued or whether everything depends on pleasing the teacher. They learn that success depends either on beating someone to the prize using every available advantage or on working collectively. Standing above the fray and saying that our practice is apolitical is not an option for a teacher. Even if we profess to have no political stance, and to be concerned purely with furthering inquiry into a discrete body of objective ideas or practices, what we do counts. The ways we encourage or inhibit students' questions, the kinds of reward systems we create, and the degree of attention we pay to students' concerns all create a moral tone and a political culture.

Teachers who have learned the reflective habit know something about the effects they are having on students. They are alert to the presence of power in their classrooms and to its potential for misuse. Knowing that their actions can silence or activate students' voices, they listen seriously and attentively to what students say. They deliberately create public reflective moments when students' concerns—not the teacher's agenda—are the focus of classroom activity. Week in and week out, they make public disclosure of private realities, both to their students and to their colleagues. They make constant attempts to find out how students are experiencing their classes, and they make this information public. All their actions are explicitly grounded in relation to students' experiences, and students know and appreciate this.

Trust is the thread that ties these practices together. Through their actions, teachers build or diminish the amount of trust in the world. Coming to trust another person is the most fragile of human projects. It requires knowing someone over a period of time and seeing their honesty modeled in their actions. College classrooms provide the conditions in which people can learn to trust or mistrust each other. A teacher who takes students seriously and treats them as adults shows that she can be trusted. A teacher who emphasizes peer learning shows that it's important to trust other students. A teacher who encourages students to point out to her anything about her actions that is oppressive and who seeks to change what she does in response to their concerns is a model of critical reflection. Such a teacher is one who truly is trustworthy.

Conclusion

As this chapter has shown, critical reflection is inherently ideological. It is also morally grounded. It springs from a concern to create the conditions under which people can learn to love one another, and it alerts them to the forces that prevent this. Being anchored in values of justice, fairness, and compassion, critical reflection finds its political representation in the democratic process. Since it is difficult to show love to others when we are divided, suspicious, and scrambling for advantage, critical reflection urges us to create conditions under which each person is respected, valued, and heard. In pedagogic terms, this means the creation of democratic classrooms. In terms of professional development, it means an engagement in critical conversation. The rest of this book explores how both these projects can be realized.

Chapter Nine

Storming the Citadel

Reading Theory Critically

The final lens through which we can view our practice is the lens of theory. Although I argue strongly for the importance of learning from experience, this doesn't mean that formal educational literature is, by definition, irrelevant. Far from it. If I believed this, I would have wasted a good part of my own life writing words that meant nothing. Educational literature can help us investigate the hunches, instincts, and tacit knowledge that shape our practice. It can suggest different possibilities for practice, as well as helping us understand better what we already do and think. In this chapter, I want to examine how educational theory, philosophy, and research can suggest new and provocative ways of seeing ourselves and our practice.

Before examining the contribution of theory, I want to say a few words about the unsound and unworkable distinction often made between "theorists" and "practitioners." The musings of educational theorists are often contrasted with the practicalities of teaching, theory and practice being viewed as existing on either side of a great, and unbridgeable, divide. I believe that this theory-practice dichotomy is a nonsense. Making this distinction is epistemologically and practically untenable. Like it or not, we are all theorists and all practitioners. Our practice is informed by our implicit and informal theories about the processes and relationships of teaching. Our theories are grounded in the epistemological and practical tangles and contradictions we seek to explain and resolve. The educational theory that appears in books and journals may be a more codified, abstracted form of thinking about universal processes, but it is not different in kind from the understandings embedded in our own local decisions and actions. As Usher (1989) suggests, formal theory serves as "a kind of resource and sounding board for the development and refinement of informal theory—a way of bringing critical analysis to bear on the latter" (p. 88).

How Reading Theory Helps Critical Reflection

1. *Theory lets us "name" our practice.* Reading can assist us in naming aspects of experience that elude or puzzle us. When we read an explanation that interprets a paradoxical experience in a new and revealing way, the experience becomes more comprehensible. As a result, we feel that the world is more accessible, more open to our influence. When someone else's words illuminate or confirm a privately realized insight, we feel affirmed and recognized. In her study of classroom chronicles, Isenberg (1994) shows how reading others' depictions of the crises, anxieties, and dilemmas that she thought were uniquely her own helped her put her own problems in perspective. Also, seeing a personal insight stated as a theoretical proposition makes us more likely to take seriously our own reasoning and judgments. This does wonders for our morale and self-confidence. It also strengthens our ability to state clearly the rationale informing our actions.

2. *Theory breaks the circle of familiarity.* Literature can also help free us from falling victim to the traps of relativism and isolationism. To quote Freire (Horton and Freire, 1990): "Reading is one of the ways I can get the theoretical illumination of practice in a certain moment. If I don't get that, do you know what can happen? We as popular educators begin to walk in a circle, without the possibility of going beyond that circle" (p. 98). By studying ideas, activities, and theories that have sprung from situations outside our circle of practice, we gain insight into which features of our work are context-specific and which are more generic. Embedded as we are in our cultures, histories, and contexts, it is easy for us to slip into the habit of generalizing from the particular. Reading theory can jar us in a productive way, by offering unfamiliar interpretations of familiar events and by suggesting other ways of working.

3. *Theory can be a substitute for absent colleagues.* For teachers who lack the opportunity to belong to a reflection group and who are unable to benefit from listening to the contrasting perspectives and interpretations of colleagues, the written word may be the only source of alternative viewpoints available. By reading books and articles, we can engage in a simulated conversation about practice with interested colleagues. Freire (Horton and Freire, 1990) puts it like this: "When I meet some books—I say "meet" because some books are like persons—when I meet some books, I remake my practice theoretically. I become better able to understand the theory inside of my action" (p. 36). A conversation with a book is written, not spoken. Books that end up with comments scrawled throughout the margins, pages turned down, and peppered with yellow slips are books we have talked with.

4. *Theory prevents groupthink and improves conversation with colleagues.* Even for teachers lucky enough to belong to a reflection group, educational literature serves an important function. It supplies provocative elements of dissonance that can shake up comfortably settled frameworks and assumptions. Teachers in peer learning groups often display an ideological homogeneity. As a member of one group commented, "It was important that we all shared certain values—mostly that we all took the job seriously and wanted to do it well, but also that we had the same basic idea about, for example, how the children should be treated" (Nias, 1989, p. 174). Members of informal support groups tend to share paradigmatic, framing assumptions about purposes and methods of education that are so deeply embedded that their existence is hardly even realized, let alone subjected to critical analysis. Teachers in these groups tend to value the same ideas and resources, disagreeing only on technical matters concerning how best to realize common aims.

In such groups, the prospect of groupthink—of an uncritical adherence to certain formal beliefs and informally developed norms—is very real. There is a mutual reinforcement of pedagogical correctness and a corresponding dismissal of inconvenient points of view as irrelevant, immoral, or ideologically unsound. To stay intellectually alive, groups may need the stimulus of unfamiliar interpretations and perspectives. As one teacher put it when talking of her involvement with such a group: "We did need to keep changing—if that had stopped happening, and nobody had changed we could easily have stopped growing" (Nias, 1989, p. 175).

Making the study of educational literature a regular feature of a reflection group reduces the likelihood of groupthink and intellectual stagnation. This is especially true if group members deliberately seek to expose each other to ideas and materials that have previously been considered off-limits, radical, or contentious. Viewing common practices through the lens of an alternative theoretical critique can expose contradictions of which we were previously unaware and can help us make explicit those paradigmatic assumptions that are part of our intellectual furniture.

5. *Theory locates our practice in a social context.* Without the regular and serious study of theoretical literature, we can easily remain immersed in a pragmatic fixation on the puzzles of our own practice. We struggle, for example, with the problem of how to use participatory and experiential methods in classes of over a hundred students, or of how to connect with every one of our widely diverse learners. We agonize about how we can catch teachable moments, diverge from our lesson plan, and build on spontaneity, while still getting through the syllabus.

Theoretical literature helps us remember that these puzzles are not just procedural kinks or pedagogic tangles to be unraveled, but politically sculpted situations illustrating the internal contradictions of the systems in which we work. Critical theory views these problems as the predictable consequences of having teachers work alone in arbitrary periods of time under a centrally controlled system. Reading this literature means that we reframe what we consider to be the "problems" in our practice. Our "problems" become defined as the refusal of the curriculum council or accreditation agency to let us develop materials specific to particular contexts, or the educational institution's placing of intolerable burdens on teachers, who are expected to take on more and more students with no additional help.

Despite numerous injunctions and exhortations by teacher educators about the value of doing a critical reading of theory, very few models are available of how this might be done. Detailed suggestions such as those given in Connelly and Clandinin's chapter

"Unlocking the Literature" (1988) are very much the exception. In the present chapter, I want to build on my own experience working with teacher reflection groups who decided to make the study of theoretical literature a central part of their activities. I urged these groups to structure a critical reading of theory around four general categories of questions: epistemological, experiential, communicative, and political. Asking a set of questions about a text provides a structure for critical inquiry that makes this activity seem less daunting. The reader has a road map to take her into unfamiliar terrain.

Asking Epistemological Questions

When we ask epistemological questions of a text, we want to find out how an author comes to know that something is true. Epistemological questions inquire into what writers regard as acceptable grounds for an assertion of truth. If the truth proposed is of an empirical kind (for example, "research shows us that when students are involved in planning their learning, they are more engaged and do better"), we need to know what kind of evidence supports this generalization and how it is obtained and interpreted. If the truth is of a more prescriptive nature (for example, "teachers should jointly inquire with students into how curricula and evaluative procedures reproduce dominant cultural values"), we can also ask questions about the experiential, theoretical, or philosophical grounds for this belief. We want to know something about the intellectual traditions influencing writers. These traditions often shape the questions or problems that they feel need addressing and also tend to undergird the specific pedagogic injunctions and advice that are offered. We also want to know what autobiographical experiences writers have had that inform these convictions.

Sample Questions

1. *Are the ideas presented by writers already predetermined by the intellectual paradigm in which they work?*

Educational theorists are just as confined within their own comfortable and familiar intellectual paradigms as are learners or teachers. It is hard to see how a confirmed behaviorist, convinced of the appropriateness of Skinner's ideas for organizing classroom instruction around the sequenced pursuit of predetermined behavioral objectives, could write a piece advocating experiential flexibility. Conversely, an author schooled in the critical theory of Habermas or Gramsci is very unlikely to write an article supporting nationally imposed curriculum standards designed to produce a highly trained workforce that supports our global economic competitiveness. For this reason, one of the first things we should find out as we approach a piece of educational writing is the intellectual tradition with which the author is most closely allied.

Sometimes this allegiance is already known from our acquaintance with the writer's previous work. Sometimes authors make explicit at the outset the traditions on which they draw most strongly. Indeed, it may be our familiarity with the writer's previous work, or the predominant intellectual traditions within that work, that draws us to a new piece by that same person. When we come to a piece "cold," however, it is important early on that we gain the best insight we can into its author's intellectual orientations and biases. We can begin with a careful scrutiny of the preface and acknowledgments to find out what prompted the author to write the text and to see if we recognize the people and ideas the author mentions as having influenced her most. We can scan the index to see what sources are most frequently cited. By this time, we will have picked up some good clues about the author's biases before doing a more detailed reading.

2. *To what extent are the central insights of a piece of literature—whether these are framed as research findings, theoretical propositions, or philosophical injunctions—grounded in documented evidence?*

Claims about the fundamental nature of teaching and learning, or the universal characteristics of teachers and students, abound in pedagogic literature. Depending on whose work you read (Henry Giroux or Allan Bloom, Paulo Freire or E. D. Hirsch), the best conditions to encourage learning are those where culturally important pieces of knowledge are clearly specified beforehand, or those where students and teachers negotiate democratic process and question the means by which certain voices and ideas come to constitute the dominant discourse. Methods such as small group discussion or experiential assessment are either lauded for their emancipatory potential and their capacity to connect to students' lives or derided as meaningless and self-absorbed disclosure representing a softening of serious academic standards. Multicultural curricula are viewed as a much-needed counterbalance to Eurocentric worldviews or condemned as a scoundrel's retreat into an intellectually flabby relativism.

When teachers encounter assertions about the fundamental nature of learning or educational process, they can ask themselves, "What evidence does the writer produce to support this claim?" By evidence, I don't mean only quantitative or experimental studies conducted according to classical canons of scientific procedure. Personal experience is wholly valid empirical evidence, provided that it is rendered as fully as possible and that the context for the experience is made clear so that readers have a chance to check for possible distortion. The requirement that evidence be provided for claims of truth does not exclude from consideration the genre of experientially inclined writing. Instead, it helps us approach such writing in a more critical way so that we can distinguish between generic and idiosyncratic elements of the experiences discussed. Evidence can also include theoretical analysis. A theory that accurately accounts for events in our practice is just as much a piece of evidence as the findings of the most exhaustive empirical survey.

3. *To what extent does the writing seem culturally skewed?*

In its tendency to deal in aggregates and universal categories, theory about learning and teaching can be culturally blind, neglectful of gender, and disturbingly ethnocentric. Every time we come across a generic use of terms like "students," "learning," "teachers," and "teaching," we can get into the profitable habit of asking what specific kinds of students and teachers are being written about and what particular kinds of learning and teaching are being discussed. Do these students come from a variety of cultures and classes? Is attention given to women's ways of knowing that emphasize interdependence and connectedness, as well as to the development of independent critical thought? Is there an unacknowledged hierarchy of learning, with university-sponsored skills of formal logical analysis valued over everyday cognition? Is intellectual acumen viewed as more evolved than practical intelligence? Are holistic and intuitive models of learning treated with the same credibility as those based on logical cognition?

4. *To what extent is descriptive and prescriptive writing fused in an irresponsible and inaccurate way?*

Apparently objective claims regarding the essential features of educational process (for example, that students' intellectual development is recognized by their increasing self-directedness, that effective learning depends on students knowing objectives beforehand, or that using simulations increases students' affective connections to knowledge) are often philosophical prescriptions that wear only the thinnest of empirical disguises. A great deal of educational writing fuses descriptive and prescriptive elements in a sloppy and irresponsible way. As we read theoretical work, we can look at generalizations about students, teachers, and educational processes and ask ourselves the extent to which they are an uncritical reflection of the writer's philosophical preferences.

Of course, writing that springs from deeply held philosophical and ideological convictions about what education should look like is often provocative and compelling. It is also more likely to influence teachers than is formal experimental or statistical research.

In one of many memorable "Talking Teaching" discussions I have had with colleagues at the University of St. Thomas, we went around the group and each named the books we saw as having been most influential in shaping how we taught. No one mentioned formal research studies or careful statistical analyses. Instead, we all chose what might be described as experiential or philosophical analyses: personal statements like Clark Moustakas's book *The Authentic Teacher* (1966), speculative essays like Herb Kohl's *I Won't Learn from You* (1994), and powerful polemics like Paulo Freire's *Pedagogy of the Oppressed* (1993). That the St. Thomas group is not alone in being moved to action by polemical writing is evident from the teachers in Kreisberg's study (1992), who spoke convincingly of how reading authors such as Jonathan Kozol, John Holt, and A. S. Neill had triggered their own determination to infuse their teaching with social activism.

I believe that philosophically grounded writing is powerful and necessary and that openly polemical writing is strongly desirable. Indeed, much of my own writing has this flavor. However, I am also aware that this kind of writing (my own included) is often imbued with a reading of the world, and of education's place within it, that is taken to be self-evident. Part of being a critical reader of pedagogic literature is getting into the habit of detecting those times when philosophical prescription is presented as self-evident empirical description.

Asking Experiential Questions

Experiential questions help us view written depictions of teaching and learning through the lenses of our own experiences. Asking these questions demystifies academic texts and brings them closer to home. It reduces the distance between what we regard as legitimate, academic codifications of what teaching and learning are, or should be, and what we dismiss as our own irrelevant or inadequate personal histories as teachers. When we ask experiential questions, we become much less willing to give away our histories.

Before beginning this description of experiential questions, however, I want to stress the danger of going to ridiculous extremes on the theme of valuing our own experiences. The honoring and dignifying of teachers' experiences is necessary work, but it does contain some implicit hazards. As Richert (1991) comments, "Research in cognitive psychology cautions us about the difficulty of learning from experience by suggesting numerous ways of misapprehending experience and thus mislearning from it" (p. 113). This is why autobiographical experience needs the critical checks provided by the multiple lenses of students' eyes, colleagues' perceptions, and literature.

Cultural distortions affect how we have, interpret, and learn from experiences. Aronowitz and Giroux (1991) point out that uncritically affirming people's histories, stories, and experiences risks idealizing and romanticizing them. While acknowledging the importance of experience, one must also recognize its potential for distortion.

Finding a discrepancy between our own experiences and what we read in textbooks does not mean that critical reflection has somehow occurred. To attribute total validity and accuracy to our experiences while sneering at the distortions perpetrated by theorists is the same as saying that when confronted with a choice, we are always right and books are always wrong. To be a critically reflective teacher means that we regard both our personal and collective experiences and our reading of formal theory, research, or philosophy as important elements in our critical journey. They are dialectically connected, with one constantly illuminating and informing the other.

Sample Questions

1. *What experiential omissions are there in a piece of literature that, to you, seem important?*

Pedagogic theorizing purports to help us understand our lives as teachers. As you read a piece of academic literature, you can ask questions about the fit between your own most important experiences and what writers argue are teachers' most important concerns. Are your most common dilemmas contained in the piece? Are the writer's problems your problems? What help are an author's words in your efforts to deal with the things in your teaching that keep you awake at night? What has this research to say about what to do when you feel you've totally lost control of your classrooms? How does it help you deal with hostility and anger directed at you by students? What responses does it suggest you make when external boards or administrative superiors change your curriculum without warning? Are your feelings of impostorship acknowledged? Educational writing should not deal only with teachers' experiences, but if a writer's theoretical insights are shown to be grounded in, or connected to, experiences that teachers recognize as their own, it is taken more seriously and has greater impact.

2. *To what extent does a piece of literature acknowledge and address ethical issues in teaching?*

Dilemmas are a constant and pressing feature of teachers' lives (Berlak and Berlak, 1981). Few of us get through the day, let alone the week, without being faced with some kind of dilemma that, while it seems methodological, has implicitly ethical dimensions. Do I let a colleague's insensitivity to a student go unremarked? How much time do I spend writing detailed comments on students' work, when I know that writing scholarly articles is what will get me tenure? How far can I push my commitment to critical thinking with students from cultures that venerate the teacher's wisdom and see education as a process of initiation? Does my commitment to student choice mean I have to honor a student's request to write the terms of his learning contract for him?

The area of practice about which many teachers agonize the most—making evaluative judgments of students' work—is so painful because the decisions they make are ethical as much as methodological (Brookfield, 1988). To what extent is it ethical for teachers to keep evaluative criteria secret from students? Is it ever justifiable to give poor students an unduly favorable report so that they stay in a program until they've had the time to develop the necessary survival skills? What happens when we know that a student is not going to make it and will sooner or later be made aware of that fact, yet every human impulse in us tells us that we should affirm and praise what he has done for fear of doing irreparable damage to his self-concept as a learner? How do we reconcile our desire not to get fired with our horror at being forced to give institutionally mandated computerized tests that we know are asinine?

Given that we live on the horns of impossibly complex ethical dilemmas every day of our teaching lives, one of the first reality checks we can apply to a piece of educational writing is the extent to which it addresses ethical issues. Is there a chapter or section devoted to such issues? If not, are they discussed throughout the narrative? Which of the ethical dilemmas posed do we recognize as our own? When we do find one that is familiar to us, is the dilemma framed convincingly, with all the contradictions and blind alleys we experience? Or is it staged to lead to a conclusion that confirms the author's prejudices? To what extent does the writing make us aware of dilemmas we had previously ignored? And more practically, do we gain any insight into our own actions as we try to work through the dilemmas discussed? All these questions are useful ones to ask as we decide whether a piece of literature is worth our serious attention.

Asking Communicative Questions

Communicative questions focus on matters of form, style, and presentation, so they may appear to be apolitical, even superficial. Yet such matters are highly political. Who decides what forms of academic language are allowed to appear in scholarly journals and textbooks? How are decisions made that certain expressive styles—such as colloquial language—go against the "house" policy of a publisher and therefore should not be allowed? Why are some journals off-limits for qualitatively inclined researchers, whose mode of presenting research is seen as too sloppy, subjective, or costly (one graph or statistical table is cheaper than a thousand quotes)? Communicative questions asked of texts help us to be aware of the politics of power and control in educational writing.

Sample Questions

1. *Whose voices are heard in a piece of academic writing?*

Teaching-learning interactions involve a multiplicity of voices, and we can examine literature to see how far this diversity is acknowledged. In research focused on learning, we can assess the extent to which learners' own voices are evident. Is there sufficient quotational data—descriptions of learning given in learners' own words—to support and amplify the theories, models, and concepts advanced? Does the author use a detached, distanced, third-person style, referring to "the researcher" or "this writer" in an objectifying way? Or does she write in the first person and acknowledge the centrality of her experiences and personality to the report? Are the findings presented in formal memorandum style, with the research described in a smooth linear fashion? Or does the presentation of the research acknowledge the hesitations, leaps forward, feelings of depression, and intuitive insights that accompanied the writer's efforts?

If axiomatic concepts are advanced to describe how people learn or teach, are these grounded in people's own words so that they would be recognized by the individuals from whose experiences the concepts sprang? Is there an explicit attempt to include a range of voices and a variety of expressive forms, such as poetry, fantasy, overtly colloquial language? Does the terminology employed reflect one class or cultural linguistic code, or are there variants reflecting ethnicity, gender, and cultural location?

When we seek answers to questions like these, we see that the books and journals we are reading—particularly those widely regarded as prestigious and weighty—are not put together by chance. They are political artifacts representing certain interests and ideologies (Apple and Christian-Smith, 1991). It becomes clear that "texts are sites of pedagogic and political struggle" and that as we approach them, we need to raise "important questions about the ideological interests at work in forms of textual authority" (Aronowitz and Giroux, 1991, p. 105). These interests are perhaps most easily discerned in handbooks or encyclopedias within the subdisciplines of education. The knowledge that makes its way into these collections is "official" knowledge. By that, I mean it is codified knowledge that has been scrutinized and approved by the field's gatekeepers. The knowledge that never sees printed form, or that appears only in occasional newsletters produced by groups of activist teachers, can easily become labeled as inherently radical, off-limits, or irrelevant.

Books and journals are the products of specific political processes in which personalities, academic reputations, loyalties, and ideologies all play their part (Miller, 1994). Analyzing a piece of educational writing as a commodity makes us realize that the words that find their way onto printed pages in scholarly tomes are produced by people working in particular social and political enclaves. This is sometimes a deflating realization for those who believe that the answers to their problems can be found in educational literature. But mostly, it is a welcome exercise in demythologizing. Teachers begin to feel much less guilty about the fact that their own problems and responses appear only rarely or obliquely in academic writing.

2. *To what extent does the literature use a form of specialized language that is unjustifiably distanced from the colloquial language of learners and teachers?*

In the literature on education, as in most other forms of academic writing, a specialized form of discourse often develops. At times, this rarefied language is necessary to capture the complexity and distinctiveness of processes that cannot easily be described in colloquial terms. At other times, however, writers throw around terms that are understood only by an "in" group of ideologically sympathetic theorists. When specialized language is used in literature on teaching, we can ask ourselves whether we feel this is justified because it promotes clarity of understanding or whether it is simply a kind of coded, scriptural signaling.

Whenever we encounter specialized language, we can ask whether or not the writer provides an abundance of examples, analogies, and metaphors to aid our understanding. We can get into the habit of checking whether a clear definition is given whenever a new term is introduced. When generalized definitions are offered, we can search for specific examples of the processes that are being defined. When a theoretical or philosophical framework is presented, we can look for a grounding of this framework in descriptions of events, dilemmas, or contradictions of practice. It is possible to write accessibly about difficult theoretical ideas. Authors such as Erich Fromm and C. Wright Mills have shown that intellectual sophistication and clarity of expression are not mutually exclusive. Both men interpreted daunting intellectual traditions (psychoanalysis, the Frankfurt School, Marxism) in an engaging, clear, and provocative way.

For me, Myles Horton's words describing his work at the Highlander Folk School in Tennessee constitute the best example of an intelligible language of critical practice. In his accounts of very specific political battles and educational situations, Horton expressed many general truths about educational process. His injunctions, insights, and analyses on the nature of teaching and learning (many of which are scattered throughout this book) are rich with implications for anyone working to help people think and act more critically. Because of his distaste for academic writing—which he saw as sterile and lacking in connectedness to action—Horton's ideas gained attention primarily through his active work. Fortunately, he also gave interviews to people who believed that his life was full of meaning for educators in all kinds of settings (Kennedy, 1983; Conti and Fellenz, 1986). In his weave of stories, metaphors, strategies, political analysis, parables, and pedagogic insights, Horton's speech is accessible yet challenging, inspirational yet familiar. He cited few, if any, secondary sources that could be described as the basis of "formal" research. Indeed, if he had been proposed for tenure at most prestigious American universities, he would probably have been turned down for his lack of publications. It is hard to imagine a more damning indictment of the schism that exists between the world of educational research and the daily experience of educational practice.

Paulo Freire, the Brazilian literacy educator, has tried to avoid the sterility of much academic writing by relying increasingly on transcriptions of his letters (Freire, 1978, 1995) and of his conversations with other educators (Shor and Freire, 1987; Freire and Macedo, 1987; Freire and Faundez, 1989; Horton and Freire, 1990; Escobar, Fernandez, Guevara-Niebla, and Freire, 1994). As he says, speaking rather than writing a book induces "a certain relaxation, a result of losing seriousness in thinking while talking. The purpose is to have a good conversation but in the sort of style that makes it easier to read the words" (Horton and Freire, 1990, p. 4). Groups of teachers have also published records of their conversations on practice as academic books (Berman and others, 1991; Branscombe, Goswami, and Schwartz, 1992; Gitlin and others, 1992; Clandinin, Davies, Hogan, and Kennard, 1993). Perhaps the best way to demystify and reduce unnecessarily formal, academic literature is to insist that more people speak their ideas to others and then have these conversations transcribed, rather than starting with the idea of writing for scholarly publication. Reading the two interviews with Henry Giroux in his book *Border Crossings* (1992) and comparing these with the prose in the rest of the book shows how transcribed conversations work as a good introduction to more complex theoretical ideas.

3. *How do metaphors and analogies reveal the writer's ideology?*

Educational writing is chock-full of metaphors and analogies that describe the act of teaching. Identifying and scrutinizing these is one good way to slip behind the formality of much academic prose and come to an understanding of the author's orientation. If someone describes the learning process as osmosis, that says a great deal about how he or she conceives the role of teacher and the kinds of behaviors expected of students. Writing about classrooms as war zones or battlefields, or about teachers as fifth columnists working behind enemy lines, clearly displays a certain ideological orientation.

When we discover metaphors and analogies that appear repeatedly in a piece of writing, we can analyze them from several perspectives. Do they embody fluid processes or are they essentially static? What are their intellectual origins? Do they spring from engineering systems of thought, from the natural biological world, or from artistic images? Do they have embedded within them clear power differentials between students and teachers, in terms of roles and obligations? Do they contain the implication that teaching or learning is predictable and can lead to a predefined conclusion?

Or do they suggest that these processes are inchoate and open? What kinds of metaphors and analogies are most frequently invoked? Are they military and sporting ones, with teachers described as coaches and intensive courses referred to as intellectual boot camps? What about the prevalence of capitalist metaphors that see educational processes and market values as interchangeable? Does the text speak of education as a product to be sold to consumers? Is skill development written about as tooling? Do learners have to buy into or own an idea?

Asking Political Questions

We raise political questions about a text whenever we ask whose interests a piece of work serves and how it stifles or animates efforts to create a more compassionate and just society. To teachers who see themselves as value-free expositors of objective knowledge—whether this be about history or mathematics, biology or philosophy—political questions are largely irrelevant. Indeed, at a time when "political correctness" is used as a term of abuse, advocating a political approach to reading educational literature carries many risks. However, most teachers are ready to admit that in constructing curricula or in deciding how to evaluate students, they make choices from a range of options. Having admitted this, such teachers usually acknowledge that there are some values and preferences that underlie their choices. The purpose of asking political questions is to make those values and preferences clear, to investigate their origins, and to determine whose interests they serve and preserve.

Sample Questions

1. *Whose interests are served by a piece of literature?*

Words are weapons that have great power invested in them. They create as well as mirror reality. Any time words are printed in the public domain, they serve to advance certain ideals, images, stereotypes, paradigms, and sets of assumptions. Educational books and articles are no exception to this. They play an important role in creating the conditions for educational discourse. They frame what are considered to be the limits of acceptable educational practice, philosophy, and purpose. What teachers, reformers, policy makers, parents, and students talk about—the issues or problems that they feel need attention and action—is often shaped by what is published. To see the truth of this, we need think only of the public debate about education during the 1980s spurred by E. D. Hirsch's *Cultural Literacy* (1987) or Allan Bloom's *Closing of the American Mind* (1987). These framers of public debate about education worked within a predominantly conservative paradigm. Consequently, the issues and problems that came to be seen as needing attention and action were defined by representatives of a dominant political ideology.

The ideological basis to Hirsch's arguments that cultural literacy was synonymous with knowledge of a certain stock of facts is nicely illustrated by Donald Macedo's *Literacies of Power: What Americans Are Not Allowed to Know* (1994). Taking items from Hirsch's list of core cultural facts, Macedo offers alternative interpretations. For example, in response to the Gettysburg Address definition of democracy as government of, by, and for the people, Macedo comments: "These words were not meant for African-Americans, since Abraham Lincoln also declared, 'I will say, then, that I am not, nor ever have been in favor of bringing about in any way the social and political equality of white and black races . . . I as much as any other man am in favor of having the superior position assigned to the white race'" (p. 70).

Some specific questions that can be asked about the interests served by a piece of educational literature are the following:

Is the text written to increase students' or teachers' sense of democratic agency?

Does a foundation sponsor the research and, if so, how does the foundation's ideology manifest itself in the authors' words?

Do the text's images of schools, teachers, students, and the learning process reinforce conformist, conservative notions of education or emphasize its activist role?

What are the authors' intended audiences? Are they writing primarily for themselves so that they can understand phenomena through the act of writing? Are they writing for a group of interested colleagues, whose reactions to their ideas will help them come to greater insight? Or are they writing for as yet unknown members of future tenure committees?

2. *To what extent are models of pedagogy reified?*

Teachers often feel, as one of them put it, that "you have all kinds of situations and forces in your classroom over which you have absolutely no control. And you're frequently set up to fail by the system" (Britzman, 1991, p. 180). Facing the prospect of sustained chaos, they often yearn for curricular and pedagogic models that promise stability and that exhibit the stamp of enduring authority. To anyone who feels like the victim of uncontrollable forces, any literature that promises "the answer" or that suggests "the right way" has an understandable appeal. The eagerness to discover a path through what seems like a series of intractable and endlessly repeated dilemmas sometimes produces a corresponding disinclination to read critically.

So whenever we come across models for good practice, we can ask how far they promote the fallacy that someone, somewhere, has an approach that works successfully, in exactly the same way, across all cultures and contexts. Rushing to embrace decontextualized, standardized formulas for teaching dampens teachers' sense of agency. It removes the inclination to make their own futures in an ambiguous, morally flawed world, and replaces it with a quest for a reified, omniscient, pedagogic savior. This is devastating for the development of democratic action or an engagement in critical conversation. By contrast, any text that emphasizes the importance of teachers' existential choices in the construction of their work is, in a sense, a political text.

3. *To what extent do texts present teaching as an individual act?*

Teachers fall easily into the habit of thinking they are both the cause of, and the solution to, all the problems that arise in their classrooms. This leads almost inevitably to unbearable accumulations of guilt about their inability to make everything perfect.The belief that they are the cause of everything bad that happens in the classroom has such a hold on teachers because of the predominance of individualistic ways of thinking about their work. We need only consider the metaphors used by teachers to describe their practice-role models—coaches, lead mountain climbers, symphony orchestra conductors, and so on—to realize the strength of the individualistic paradigm. Yet crucial to teachers' survival is an appreciation of collectivist thinking. Such thinking regards individual and collective advancement as inseparable. It recognizes that what is perceived as an individual problem is usually structurally caused and therefore only addressed by collective action.

As we read educational literature, we can look at whether the images of teaching that are offered are individualistic or collectivist. Are models of learning and teaching placed squarely in a social or political context so that educational practice is seen as culturally constructed and transmitted? To what extent is professional autonomy elevated as a primary goal of teaching? Do the metaphors and analogies used to describe teaching bolster the idea of teachers as independent rulers of the classroom domains they survey? Are the disciplinary and political divisions between teachers and teachers, and teachers and students, presented as the natural order of things? Or is there a recognition that compartmentalizing disciplines and segregating teachers as workers in individual pockets of production represent an importation of factory modes of organization into the educational arena?

When we look at writing on teacher evaluation, we can inquire into how far models and techniques of evaluation focus on the individual teacher and on individual practices. Is pedagogic excellence defined in terms of individual content expertise and methodological fluidity? Or is the ability to cooperate with and support colleagues equally valued? Do evaluation protocols include peer collaboration as an item or cluster of items? Is collaboration with colleagues a central component in performance appraisal documents? Does an engagement in mentoring appear as an important criterion by which to judge teachers' efforts?

4. *What contribution does a piece of writing make to the understanding and realization of democratic forms and processes?*

Literature on teaching can help the democratic pursuit in different ways. It can help us analyze and critique the forces that create in us the belief that the way things are is the way they should be. It can help us understand how the culture of our institutions privatizes teachers' work and stifles the spirit of collaboration and collectivism. It can give us tools, techniques, and tips on how to make curricular and evaluative decisions that are negotiated rather than imposed. It can suggest ways of reducing teacher talk, increasing students' contributions, and modeling respectful disagreement. It can also alert us to the possibilities of malefic generosity, of false empowerment, and of the unwitting creation of distance and barriers by the very teachers who are committed to breaking them down.

For democratically committed theorists striving to develop teachers' critical consciousness, one of the hardest things to recognize is a tendency in their own writing to reinforce traditional notions of authority. Theorists committed to empowering teachers can find, paradoxically, that their work is having the opposite effect. This happens when the power of their critique makes them appear superhuman in their capacity to detect oppression. They write as if they are heat-seeking critical missiles able to home in, at great speed, on oppressive practices that reproduce dominant cultural values.

All too often, an analysis intended to liberate teachers creates an unfortunate dichotomy. On one side is the sophisticated critical theorist able to penetrate hegemony, dominant cultural values, and structural distortions with a single withering glance of pure clarity. On the other side stands the teacher as unquestioning dolt, duped into an uncritical acceptance of structural oppression, economic inequity, racism, sexism, and the silencing of divergent voices. When we read literature that announces its emancipatory intent, we can be on the lookout for the perpetuation of this dichotomy.

As we read this literature, we can also ask that it help us think through some of the tactical struggles we are bound to face as we try to work democratically. The terrain between rhetorical exhortations to emancipation and the realization of this ideal is strewn with landmines. Activist educators like Paulo Freire, Myles Horton, and Ira Shor frequently warn of the dangers of unreflective activism, where naive but inspired teachers without allies or strategy rush to take on the educational establishment. Educational literature that urges democratic practice can be scrutinized for the extent to which it offers tactical advice on circumventing the impediments placed in the way of such practice by institutions and the wider political culture.

We can ask whether or not the writing contains suggestions on how to survive as a change agent in hostile territory. Do we learn from this literature how to research an organizational culture so that any action we take has the greatest possible effect with the least possible personal harm? Are the typical hazards of democratic practice (burnout, martyrdom, isolation, professional exclusion) laid out clearly? Does the literature explain how we might use an organization's language and symbols to our own advantage so that we can justify what we are trying to do in unimpeachable terms? Do we read about how to recognize the most promising pressure points for change? Is the importance of accruing institutional credibility prior to pressing for democratic change acknowledged? Can we find recognizable simulations and case studies of democratic practice that help us anticipate, weigh, and plan for the consequences and risks involved?

Critical Reading and Critical Modeling

I want to end this chapter by placing critical reading in perspective. Time and again, commentaries on critical teaching (Shor, 1987a, 1992b), critical thinking (Brookfield, 1987), critical reflection (Mezirow, 1990), and critical pedagogy (Smyth, 1988) stress the overwhelming importance to learners of seeing the process of critical analysis modeled in front of their eyes by someone they deem credible. The importance of critical modeling was acknowledged in one of the earliest treatises on adult education, when Lindeman (1926) wrote that whatever the facilitator brings to the group in the form of opinions, facts, and experiences "must be open to question and criticism on the same terms as the contributions of other participants" (p. 120). In Berlak and Berlak's terms, "If we as teachers hope to encourage critical thought in others, we must engage in it ourselves. Throughout our teaching careers we must participate in an ongoing, collaborative process of reevaluation of, and liberation from, our taken-for-granted views." (1987, p. 170).

This means that those of us who are trying to get colleagues to identify and question their assumptions, or to look at their practice through different lenses, must do the same. We must think of "putting *ourselves* into practice rather than putting theory into practice" (Collins, 1991, p. 47). We must invite and welcome public critical scrutiny of our ideas and actions. We must acknowledge that we may change how we think and teach as a result of engaging in critical conversation with our peers. We must stress that the ideological and methodological outcomes of a critical conversation are always open. We must admit to the possibility that our own most deeply held paradigmatic assumptions might be challenged and changed by what our colleagues say and do. Liston and Zeichner (1987) argue this theme as follows: "Radically oriented teacher educators must serve as living examples of the very kind of critically oriented pedagogic practices that they seek to have their students adopt" (p. 113). Put simply, critical teachers must be seen to be critical learners too.

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